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ABSTRACT

A review and analysis of the economic outlook for the early 1980s, this paper emphasizes the uncertainties that characterize current predictions. It begins with the highlights of the consensus forecast that predicts a mild to moderate recession tapering off after midyear 1980, with a sluggish recovery extending through 1981 and probably 1982. The study reviews the outlook for the early 1980s as predicted by a number of major economic forecasters. It includes an appended background discussion of the nature and methodology of macroeconometric forecasting and points out basic problems and criticisms raised regarding macroeconomic models. With this groundwork, the discussion proceeds to an analysis of major forecasts in a number of areas. Briefly, it predicts that inflation will continue at double-digit rates, the gross national product will decline in 1980, there will be a recession in consumer spending, interest rates will peak in early 1980, the housing and automobile industries will be sources of weakness, and government sectors will be sources of economic restraint. The author notes that the early 1980s are expected to bring a tapering down of federal aid to education. (Author/JM)

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ECONOMIC OUTLOOK FOR THE EARLY 1980's: MIXED SIGNALS IN A CHANGING SETTING

Richard E. Slitor

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PREFACE

The public school establishment has a multifold interest in and concern with the condition of the nation's economy and its prospects for the 1980's. As citizens, voters, taxpayers, and homemakers, public school personnel share the concern of all Americans in their own and their families' and neighbors' economic well-being. But economic conditions affect teachers in more direct ways, as well. By their impact on governments' revenue resources, economic conditions influence the quality of work teachers are able to do in their classrooms, in the environment in which they have to function.

Continued inflation (and the fiscal stringency that accompanies it) is debilitating public school institutions. It is resulting in deferred maintenance of school plants, facilities and equipment; in depleted inventories of school supplies and teaching materials; in payscales lagging behind cost-of-living increases; and in erosion of fringe benefits and underfunding of retirement systems. Overcrowded classrooms presided over by discouraged and disenchanted teachers take their toll.

Public school officials understandably focus on economic conditions in their immediate area. Their financial support is derived largely from their respective states and local governments. The economic health of the nation as a whole, however, has a pervasive impact on schools everywhere. Federal funding of public schools remains strikingly small, especially in comparison with that of other Western countries. It should and must be increased both because (a) the educational quality of the public school graduates, wherever they chance to live, profoundly influences the nation's ability to recapture and resume its historical pace of economic growth—a critical contributor to the nation's defense capability and its citizens' standard of living—and (b) because it is indispensable to narrowing the vast disparities among the educational offerings of the states.

This school year, the average expenditure per pupil in average daily attendance is estimated to vary from $1,300 in Arkansas to $2,800 in New York. The average salary of classroom teachers is estimated to range from $11,900 in Mississippi to $19,200 in New York. These averages mask even greater variations among school districts within individual states. Differences in locally prevailing price and compensation levels can help rationalize some of these differences, but only a small part of them. Most intrastate and interstate differences in the level of public school support result from differences in local financial resources and political attitudes

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presumed to reflect voter sentiment toward the support of this pivotal government function.

At the start of the 1980's the economic outlook is less clear and more confused than possibly at any time within memory. Day-to-day changes in foreign relations, with their implications for national defense needs; in the machinations of petroleum producers; in money market conditions; in housing and automobile production statistics; in gold, silver, and mineral quotations, etc., are reflected in everchanging economic forecasts.

Because the economic outlook plays an important part in the policy positions the National Education Association is called upon to adopt on a variety of social and economic issues, NEA Research commissioned Richard E. Slitor to review and analyze the more widely recognized economic forecasts as of the start of the 1980's, to identify the differences and similarities in their underlying assumptions, and to explain and assess their significance. Dr. Slitor's lucid and informative exposition will aid the Association's policy officials and the officials of its state and local affiliates to a better understanding of how the nation's economy functions. This, in turn, will help them to discharge their responsibilities.

Dr. Slitor is an economic consultant with extensive academic and government experience. He holds S.B. and Ph.D. degrees from Harvard and an M.A. from Colgate. He has taught at both of these institutions and at Mt. Union College and the University of Massachusetts. He has served in various research positions at the U.S. Treasury and as consultant to such public and private organizations as the Rand Corp., the Committee for Economic Development, the Advisory Commission on Intergovernmental Relations, the National Science Foundation, the New York State (Fleischmann) Commission on Education, the Federal Reserve system, and the United Nations. He has participated in several missions abroad and has authored some fifty titles in learned and technical journals.

Frank W. Kovacs
Director of Research

March 1980

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ECONOMIC OUTLOOK FOR THE EARLY 1980's: MIXED SIGNALS IN A CHANGING SETTING

Executive Summary

This paper reviews and analyzes the economic outlook for the early 1980's. An interpretive survey of various major forecasts, it emphasizes the extraordinary and pervasive uncertainties that characterize the current predictions, the assumptions on which they are based, and the range of possibilities of which a consensus-type view is a part. These doubts and uncertainties, the paper points out, include the reliability of applying past statistical relationships to the present situation, extend to the economic indicators and measures used in forecasting and quantifying results, and involve even the theoretical framework and methodology of modern macroeconometric forecasting.

Pervasiveness of uncertainty

The analysis begins with the highlights of the consensus forecast, which predicts a mild to moderate recession tapering off after mid-year 1980, with a sluggish recovery extending through 1981 and probably into 1982. A recession forecast has prevailed for some months, and the delay in its appearance has sent economy watchers scurrying, amidst mixed signals and portents, for explanations for the persisting slippage in the recession schedule.

Consensus forecast

As the year 1980 began, forecasters continued to scan the economic skies for trustworthy signs confirming that the much-advertised, long-awaited recession of 1979-80 had at last begun. But, as the discussion points out, their attention to this elusive phenomenon and the problems of inflation and energy cost and supply was soon shifted to a new cluster of political events and economic portents:

Elusive recession of 1979-80

- The possibility of a grave military confrontation in the Middle East and Persian Gulf area
- The Administration's "partial" embargo on grain shipments to the Soviet Union, the Moscow Olympics boycott, and related developments signaling the end of detente
- Growing economic signals from official and unofficial sources that the economy, in stubborn defiance of most forecasts, had grown at least modestly and, in some respects, was surprisingly resilient, even robust.

Political events and new economic signals

The discussion reviews in some detail the conflicting trends and year-end doubts and uncertainties, including vigorous consumer spending and persistently low rates of unemployment, that present the questions: Is the 1980 recession real? What revisions are necessary in the post-Afghanistan situation in which a defense build-up may basically alter the framework of economic assumptions for the future?

No clear turning point

As of mid-February 1980 it was still appropriate to report that while the economy might be at or approaching a critical turning point, no unequivocal data supported this view. As sophisticated observers pointed out, there were no positive signs that business conditions were worsening or that they would continue to hold up. The term *standoff* seemed to describe the situation—an economy still basically in even stride, with no new strengths, no gathering weaknesses, and a delicate balance of the leading economic indicators between pluses and minuses.

Continued inflation the only certainty

If there were a self-fulfilling prophecy effect of recession forecasts, the 1979-80 recession would long since have materialized. Yet even as of mid-February, forecasters generally clung to their expectation of recession. They saw deterioration below the surface; the ineluctable aging of the business cycle; and faint hope, if any, of any fresh stimulus via monetary or fiscal policy or resurgence of consumer or business demands, under constant erosion as they were by inflationary price-cost increases. Only defense spending and new activity in coping with the energy crisis offered "rays of hope." If there was any firmness in the outlook, it was for continued inflation at only a slightly moderated double-digit rate, come recession or come continued growth.

Hunger for "bad news"

There was almost a hunger for bad news among economy watchers; bad news became good news in a world of inexplicable and virtually uncontrollable inflation. Recession, a more semantically favorable term than even mild depression, represents a condition economists are more familiar with, something which promises some measure of relief from demand-pressured inflation, something public policy can fight with approved weapons. It was a hunger for bad news that would confirm previous forecasts and dissipate discomforting impressions that the economy is beyond understanding or rational remedial action.

Gold the barometer of international anxiety

Throughout the early days of 1980, gold came to be increasingly recognized as the barometer of international anxiety; of loss of faith in the dollar and financial institutions; of a desperate quest for ultimate, portable, anonymous, and primitive security. But there were hints that the

gold frenzy might bring into question previous U.S. demonetization policies that rejected any future role for gold in the international monetary structure.

The major macromodel forecasters and other sources

With this background, the study reviews in broad outline, and in major sectoral detail, the outlook for the early 1980's as predicted by a number of major economic forecasters. These include the great macroeconometric model forecasts of Data Resources, Inc. (DRI); the Heller-Perry outlook letter, sponsored by the National City Bank of Minneapolis; the views of Citibank's Economics Department, published in *Economic Week*; the official government projections embodied in the Economic Report of the President and the Annual Report of the Council of Economic Advisers; and the fiscal year 1981 budget documents, as well as a range of others reported in the financial press and publications such as the *Wall Street Journal,* McGraw-Hill's *Business Week, U.S. News and World Report, Dun's Review, Nation's Business, Fortune*, and others.

The analysis includes an appended background discussion of the nature, methodology, and problems of macroeconometric forecasting. A separate appendix also summarizes a recent comparative performance rating of the great macroeconometric forecasting models: Data Resources, Inc. (DRI), Chase Econometric Associates, Wharton Econometric Forecasting Associates, MAP-CAST Group-General Electric Co., and the median forecast from a survey conducted jointly by the American Statistical Association and the National Bureau of Economic Research.

Weaknesses and limitations of the neo-Keynesian macromodels

The paper points out certain basic problems and criticisms sometimes raised in connection with macroeconometric models. These computerized systems of simultaneous equations are based upon past relationships and their assumed persistence in the forecast period. They are generally based upon a neo-Keynesian concept or model of how the economic system works: total income is assumed to be the sum of its parts; the parts are deemed to be largely additive; saving, by and large, is considered a depressant; and spending is assumed to generate income in accordance with a kind of "dollar is a dollar is a dollar" philosophy, which tends to emphasize demand and overlook the supply side and the incentives that help encourage productivity. Another Achilles heel of the forecast models is the difficulty they apparently have in pre-identifying and reliably forecasting an economic turning point, such as that predicted in the 1979-80 situation. As demonstrated by the experience in late 1979, the models,

in common with less sophisticated forecast techniques, have limited ability to predict the behavior of consumers, especially where consumer demand is fortified by a large, not clearly measureable, supporting fund of credit resources and liquid savings. Like other forecast methods, the econometric models are sensitive to disturbances in their underlying assumptions about major factors in the economic structure, public policy commitments, and essentially unpredictable political-economic contingencies—the probabilities of which must be assessed by essentially subjective, intuitive methods.

Major forecast assumptions

The paper examines with at least a broad-brush treatment the uncertainties surrounding major forcast assumptions, such as those relied upon in recent DRI forecasts: (1) fiscal policy and budgetary posture, (2) monetary policy and the interest rate structure, (3) energy prices and availability, and (4) the position of the dollar and the state of world economies.

Major forecast areas

With this groundwork, the discussion proceeds to an analysis of major forecasts in a list of forecast areas, including (1) the inflation outlook, (2) the gross national product (GNP), (3) consumer spending, (4) business fixed investment, (5) inventory behavior, (6) interest rates, (7) housing, (8) auto production and sales, (9) the government sector, including separate treatment of the state and local sectors and the federal government, (10) employment, unemployment, and productivity trends, (11) industrial production and capacity utilization, and (12) defense spending. Usually, these forecast areas represent "dependent variables" that are projected by computerized macroeconometric models on the basis of their systems of assumptions or "independent variables." In some cases, such as defense spending and government operations, they represent detailed independent analysis and informed judgment about future developments in the early 1980's.

Inflation outlook

In the inflation area, the paper points out, forecasters generally predicted that inflation will continue at recent double-digit rates, or possibly worse, through the first half of 1980. Demand pressures are expected to recede slowly, and the December 1979 oil repricing effects will continue to percolate through the economy. After this process is completed, inflation is expected to fall back to high, single-digit figures. The impact of higher defense spending and possible departures from the relatively restrained budgetary posture mapped out in the 1981 budget is not much taken into account in these inflation forecasts, although it is recognized that there are risks that economic and political events may cause higher-than-expected rates of price increase.

The GNP outlook

Gross national product (GNP), the heart of an economic forecast, was generally predicted to decline in real terms (current dollars corrected for inflation) by some 1 or 2 percent in 1980 below that of 1979. The general flavor of the consensus-type outlook is given by a total GNP of some $2.6 trillion in current dollars for 1980 as a whole, subject to an inflation correction factor in the 9- to 10-percent range. In terms of constant 1972 dollars, the 1980 GNP would be somewhat over $1400 billion versus $1432 billion in 1979. There are recognized possibilities of a smaller percentage decline in real GNP, but the major risks contemplated by forecasters in January 1980 were that the recession would be deeper. The DRI forecast of January 1980 foresaw recovery in terms of real GNP growth rates in the 2.5-percent range in 1981 and 4-percent range in 1982.

Consumer spending and business investment

The paper traces in some detail the expected recession pattern of weakness and decline in consumer spending and business fixed investment, major components (roughly 64 percent and 11 percent, respectively) of the GNP.

Inventory behavior

Forecasters found strength in the relatively restrained or "lean" inventory position of business, which they felt would stave off the possibility of large or volatile inventory movements that might aggravate the expected business downturn. Considerable risk was recognized by some that a reversal of the recession forecast could lead to explosive scrambling by businesses to restock their inventories.

Interest rates

It was generally believed that interest rates had already peaked or that they would peak early in 1980, with the possible exception of long-term bond rates. Mid-February 1980 developments suggested that even long-term bonds were being temporarily taken off the "untouchable" list, signaling a leveling-off or possible decline in their yields. Most forecasters believed that the projected decline in interest rates will be slow in 1980-81. There were dissidents who felt the risks of continued high interest rates are real if inflation control is not appreciably effective. Some felt that "nominally" high interest rates (but low real rates after subtracting expected inflation rates) combined with relatively loose credit remain the order of the day and may help continue the inflation.

Housing and autos

The housing and auto sectors, both expected to be sources of weakness in the 1980 economy and possible contributors to recovery in 1981, are examined in some detail. There is room for various shades and qualifications of optimism and pessimism in both housing and autos in the near-term 1980's.

Government sectors

The government sectors, state and local and federal, constituting some 20 percent of the GNP at recent levels, are regarded as probable sources of constraint or as at least a leveling-off tendency in the 1980-81 economy.

The impact of government on the economy may be viewed both in terms of the size of government purchases of goods and services as a component of GNP and in terms of the mode of financing overall operations, i.e., the resulting budgetary posture of balance, deficit, or surplus.

Little or no real growth in total purchases by state and local governments is forecast over the next year or so. This represents a sharp deceleration of state and local purchases from 1979 levels. Some gradual expansion of state and local purchases is anticipated with the predicted economic recovery in 1981. From the budgetary standpoint, the overall state and local position is expected to shift to a substantial deficit (in the $12- to 14-billion annual rate range) as against the record surplus position of a year or so ago. Thus, while state and local purchases are expected to remain level—held in check by tax and spending limitations and a clamp-down on increases in federal grants—the anticipated deficit would tend, other things being equal, to be a stimulative or inflationary factor for the economy as a whole, particularly if some indirect "accommodation" of these financial demands is made by federal monetary authorities.

Federal budget 1981

The federal budget for the fiscal year 1981 is expected to provide substantial fiscal restraint, barring defense or defense-related increases in spending beyond budget-planned levels. Some are concerned that the federal budget may swing too sharply toward restraint in 1980-81, generating a too high employment surplus (the surplus that would be produced under existing tax revenue schedules at a high level of employment). This fiscal drag element is regarded as "tighter and tougher than in most election years" but should be ameliorated in light of the rise in defense spending, "election year slippage," and business investment outlay response to the defense buildup. Some cautionary attitude in the budget posture is justified in view of inflation trends. While tax cuts are a possibility in 1980-81, they are not factored into the official federal budget, which counts on substantial revenue from the oil windfall profits tax—not yet passed by Congress. All this leaves open to speculation possible near-term tax reductions to redistribute windfall tax moneys to the public or to encourage productive business investment. The issue of tax cuts in 1980-81 is complicated by growing doubt and uncertainty on whether recession or austere fiscal policy to create slack in the economy really helps curb inflation in view of what is regarded as a high underlying inflation rate

component due to the inertia of the cost-push, wage-cost spiral and other "institutional" factors that are not susceptible to conventional restraints in demand.

Federal grants-in-aid and the squeeze on education

From the standpoint of education programs, the early 1980's are expected to bring a tapering down of federal aid to the states and localities. The substantial growth rate in federal grants-in-aid will be replaced with a more level funding situation subject to squeeze by inflation. This, together with state and local tax and spending limits, will further complicate state and local efforts to deal with inflationary rises in the costs of fuel, transportation, and other operating necessities and add a further squeeze on measures to adjust salaries in line with increases in the cost of living (adjustments already estimated to be 12- to 15-percent behind the rise in living costs). The paper analyzes in some detail the federal aid programs for education in the federal budget, including the major youth education and training initiative, and the prospects for slowing in the rate of growth in federal aid to education and related areas in the early 1980's. The slow-growth or no-growth trend in federal grants-in-aid programs generally will result in keener competition among various social program initiatives. The federal government's efforts to cope with the situation by allocating slimmer means among competing needs and goals will be complicated and made less palatable by the apparent paradox of stagflation—the persistence of an uneven margin of unemployment and underutilization of human and other resources in the face of a mysterious and virulent inflation.

Unemployment and productivity trends

In the employment-unemployment area, the paper reports forecasts of a rise in the unemployment rate to the 7- to 8-percent range at the projected recession peak, generally anticipated by mid-year 1980 or possibly later. These forecasts are made in the face of recent stubborn strength in the labor markets, although the economy was supposed to be already in the foothills of recession. Analyses of employment, unemployment, and related productivity trends note the somewhat puzzling decline in labor productivity, some of which is attributed to labor compositional changes and some to the recognized phenomenon of cyclical weakness in productivity in periods of recession and slow growth.

Mixed signals and continuing doubts and revisions

The 1980-81 economic scene presents a severe test for both the economic forecaster and the policymaker. Economic developments continue to throw off mixed signals and compel almost kaleidoscopic revisions of underlying assumptions. Gleanings from the financial press as of mid-February 1980 reflect continuing doubts and hesitations. Economists

generally continued to forecast moderate recession, with slow and weak recovery—handicapped by inflation, overhanging debt, tight credit, and tax restraints—after the recession ends. But after the seemingly endless wait for clear recession signs, they were reported to be more nervous about specifying dates. One major forecaster continued to adhere to a recession prediction but conceded that the probability of its not happening was being upped to about one chance in three.

Possible no-recession scenario

Some financial press reports as of near mid-February 1980 indicated that a growing minority of private economists are defecting from the bandwagon view of impending recession. Others who cling to the standard recession forecast are found to be postponing its onset by another quarter or so or shortening the odds against the recession scenario.

A 1980 recession would not be the one originally forecast

The forecast status as of mid-February 1980 suggests that even if and when the long-predicted downturn of 1980 materializes, it will embrace economic disturbances and dislocations due to external political events and control measures that will basically alter its originally predicted character as a phase of an aging business cycle.

ECONOMIC OUTLOOK FOR THE EARLY 1980's: MIXED SIGNALS IN A CHANGING SETTING

I. Introduction

A. *What this paper seeks to do*

An essay on economic uncertainty and forecasting problems and limitations

This paper is an essay on economic uncertainty in the context of the economic outlook for the early 1980's. Designed to be both reportorial and analytical, it examines the consensus and the range of forecasts for the U.S. economy in 1980-81 from the vantage point of mid-January 1980. For a variety of reasons, uncertainty is, of course, the overriding factor in the forecast for 1980 and a considerable period beyond; 1980 is a year of little firm promise; and forecasting—always a risky business—is beset with an unusual number of hazards and difficulties at this time. The reader of the daily newspapers, financial columns, and the more specialized financial press—let alone the sophisticated macroeconometric model forecasting services[1]—is well aware of the pervasive nature of present forecast risks and uncertainties. The source of uncertainty is at least fivefold: (1) the critical turn of international events in Iran, Afghanistan, and the Persian Gulf area, (2) the unfolding scenario of an unprecedented inflation process, (3) the repercussions of a drastic new monetary-interest rate policy, (4) inherent difficulties in forecasting at a transition point in the economic cycle, and (5) new doubts about the strength of the economy and the forces sustaining it. This paper will not belabor the obvious on this point, but will explore the forecasts in some structural and sectoral detail, and look into some little recognized sources of forecast uncertainty and confusion. It will examine the anatomy of economic forecasting and its problems and limitations in the light of the evolution and devolution of neo-Keynesian and national income economics. It will add some comments on the implications of current economic outlook analysis for the development of applied economics and for policy commitments in vital areas of public expenditure and taxation.

B. *Highlights of the consensus forecast*

The consensus forecast

The highlights of the apparent consensus forecast for 1980-81 are not difficult to summarize within brief compass. The summary almost by itself formulates the questions about the course of the economy and its paradoxes that present themselves to the thoughtful observer.

The 1979-80 recession a reluctant dragon

The economy is expected to slump or slide into a recession—usually characterized as relatively mild and brief—if, indeed, it is not already in one. The trough of this slowdown will be reached about mid-year 1980 or shortly thereafter, to be followed by a relatively prompt recovery. Many believe the recovery may obliterate most traces of the downturn by Election Day, November 4, 1980. Since any forecast represents one of a cluster of possible outcomes, each with its own probability weight attached, it is significant to note that apparently only a minority of forecasters believe that there is much chance that actual developments will turn out better than the relatively benign scenario embodied in the consensus outlook. It is also to be borne in mind that the currently predicted recession is a highly elusive phenomenon. It is the recession that is not there. This reluctant dragon has defied numerous predictions throughout 1979 that it would soon emerge, and its existence or imminence was rudely rejected by the unmistakable statistical evidence of economic strength, robustness, and resilience in such key indicators as retail sales and unemployment that emerged in the last quarter of 1979.

Most forecasts hold that the unemployment rate, about 5.9 percent as of year-end 1979, will rise as an almost necessary feature of a recession, but will not go above some 7.5 to 8 percent of the labor force at its worst, a point to be reached in the fall of 1980.

Paradox of stagflation will persist

The paradox of stagflation will continue to plague us and enter a new and more troubling aspect. In spite of an expected appreciable downturn—in the 1- to 2-percent range—in the gross national product (GNP) and rising unemployment, inflation as measured by the consumer price index (CPI) will be moderated only slightly below the 13.3-percent annual increase it recorded in 1979. There seems to be little question among the consensus forecasters that the inflation rate will continue at a double-digit rate in 1980, possibly in the 10.5- to 12-percent range for the year 1980 as a whole.

Interest rates

Interest rates are generally believed to have already reached their peak and to be on the point of edging downward over the year 1980, although still under the influence of the new austere Federal Reserve Board policy

on interest rates initiated by Chairman Paul A. Volcker early in October 1979.

Corporate profits and oil, energy, and defense

Corporate profits in the aggregate may continue to rise in 1980, but the increase may be less than the inflation rate, and the profits picture will be spotty and uncertain. The total profits picture will be bolstered by large further increases for oil and other energy companies and possibly by the defense-oriented industries. Some observers believe that if the oil profit increases are removed from the analysis, the remaining profit total may be somewhat, probably slightly, lower in 1980 than in 1979.

Economy has life-of-its-own syndrome

Even these consensus-type predictions are doubtless made with implicit reservations. The errors of economic forecasting in the recent past demonstrate that many of the key indicators (major components of the economy itself) seem to "have a life of their own" and stubbornly resist the supposedly predictable behavior pattern expected of them on the basis of accepted economic doctrine or past experience.

C. *Administration posture*

On the very eve of President Carter's budget and economic report, the Administration was reported to remain uncertain as to how the economy, which continued to defy recession forecasts, would perform in 1980; it remained torn between the objective of reducing U.S. dependence on foreign oil by the orthodox but procrustean restriction-rationing technique of permitting gasoline and heating oil prices to rise further and anxiety over the severe cost-push and related effects this would have on the U.S. inflation.

The standard forecast

In the face of these uncertainties and choice problems, the Administration's basic forecast was reportedly in line with the "standard" 1980 forecast of most analysts: a mild recession in the first half of 1980, an average annual unemployment rate of 7.4, and a consumer price rise of some 10 to 11 percent for 1980 as a whole.

Yet financial press reports indicated as of mid-January that the Administration was still debating, or at least not ruling out, both possible tax cuts, antirecession spending increases in the form of job-creating projects and public works programs. The Administration's practical policy posture was reportedly described by a former official economic adviser, still in

close touch with Administration policymakers, as "adjusted to the facts of the present rather than to the forecasts of the future." The present economic situation was described as a "soggy plateau" and the task of economic policy formulation in 1980 likened to a "ballgame . . . played under a smoking volcano."

Confusing signals

As January 1980 wore on, the delay and uncertainty of the long-heralded recession were enhanced by further unfolding of news of strength of the economy. Well after mid-January 1980, key indicators continued to show that the downturn would be delayed and would be, if anything, milder than previous estimates. Housing starts in December 1979 were found to have edged up by 0.3 percent, in contrast with the 14-percent decline in November and in the face of unprecedented mortgage interest rates and tight money conditions. Personal income increased by a seasonally adjusted 1.1 percent in December 1979 and consumption rose by 2 percent, apparently financed in part by a reduction in the consumers' rate of personal savings to a new record low level. In addition, Federal Reserve data showed the nation's manufacturing plants continued to operate at over 84 percent of capacity in December 1979, unchanged from November. The latest data (for the week ended January 9, 1980) also showed that the basic money supply (currency in circulation plus checking accounts in commercial banks) had declined less than had been expected by experts, while a more comprehensive measure of the money stock, including time and savings deposits in commercial banks exclusive of large certificate accounts, increased. Money markets responded with a spurt in short-term interest rates.

Sense of economic threat and foreboding

Despite primary attention to the relatively routine problems of "stagflation," and the curiously tenacious stability of the economy, which at worst showed signs that its expansionary force was "running out of steam," there was a note of foreboding and a pervasive sense of grave threats to the nation's basic economic and military security and the not entirely remote possibility of movement to a mobilization basis with mandatory direct controls on prices, wages, and the utilization of energy and materials.

Gold frenzy and the old demonitization policy

Gold prices meanwhile continued their spectacular rise, reaching $820 per ounce as of January 17, 1980. This market was followed by some "correction" in subsequent weeks but remained strong. There were indications that the Administration's "muted response" to the new frenzied phase of gold buying suggested a possible shift or adaptation of its previous policies with respect to gold that were designed to dampen private gold speculation and ultimately to phase out the role of gold in the world's

monetary structure. Gold had come to be recognized as a barometer of international anxiety, of weakened faith in the dollar and financial institutions, and of return to a form of economic primitivism.

Strategy of restraint

In his message on the 1981 budget, President Carter announced a continued "strategy of restraint." Yet, the economic background was described in terms of his projection that "the long economic recovery occurring throughout my first term may falter this year . . . there will be some decline in GNP during the course of 1980, followed by renewed but moderate growth in 1981."[2]

D. *Paradoxes and queries*

Some basic questions about inflation, the economy, and forecasting problems

The economic outlook for the early 1980's and the related tasks of policy decision making underscore a number of fundamental paradoxes and questions which have increasingly plagued the economy for more than a decade. Let's restate them briefly. The discussion that follows may help throw light on some of these issues.

The first basic issue, and in many ways the most neglected yet most difficult, is: What are the causes, the components, of the persisting and nearly worldwide inflation movement and how can they be dealt with?

Some closely related issues: If inflation control stands in the way of full utilization of our human and other resources, can we continue the unhappy compromise of stagflation? Does the only free enterprise solution lie in conventional monetary and fiscal policy techniques that involve heavy employment costs? Will greater reliance on management of prices and incomes be called for? If inflation on a substantial scale seems to be the price of continued, reasonably full employment, what measures need to be instituted to allow people to live with it more rationally and equitably?

More immediate to the present fiscal situation: What accounts for the unexpected and recession forecast-defying strength of the U.S. economy as of mid-January 1980? What revisions in our forecast techniques and theoretical framework are called for to help remove this kind of confusing uncertainty for future policymaking?

To what extent is the confusion about inflation and the economic outlook due to (1) mismeasurement of major indicators, (2) defects in such standard statistical measures as the CPI, unemployment, money supply, and productivity, or even (3) failure to reach a still inadequately measured segment—the "underground economy"—hidden from official and other information systems because of tax evasion, undocumented alien operations, or other factors?

FOOTNOTES

[1]*Macroeconometric* is a term that combines the more usual dictionary terms "macroeconomic" and "econometric." It refers to the use of mathematical and statistical techniques to analyze and make quantitative predictions dealing with broad economic aggregates, their interrelationships, the determination of national income and output, and the equilibrium of the economic system as a whole. Macroeconomics is in contradistinction to microeconomics, which is concerned with more limited areas of economic behavior and activity, such as the individual or household, the business firm, and the market for a particular commodity.

[2]Budget Message of the President. *The United States Budget in Brief, Fiscal Year 1981*. Washington, D.C.: Government Printing Office, January 28, 1980. p. M3.

II. Overall Economic Outlook Uncertainties

A. *Year-end doubts and mixed signals*

Toward year-end 1979 an uneasy consensus seemed to be shaping up that the long-predicted recession was beginning to materialize. For example, a poll of 42 major economic forecasters, published in Robert J. Eggert's *Blue Chip Economic Indicators*, showed that the average forecast predicted that the inflation-adjusted gross national product (GNP) would show a decline at an annual rate of 1.5 percent in the fourth quarter of 1979 (1979: IV), then a sharper decline in 1980: I-II. This forecast, however, was an average that tended to conceal a virtually unprecedented range of differing estimates. Indeed, a minority of the forecasters polled were reported to be of the opinion that the recession had yet to begin; some did not expect any real recession in 1980.[1]

Revisionism

Year-end 1979 was not only a period of variation among economic outlook specialists, but also one of revisionism. In general, the revisions tended to scale down previous predictions for change in the GNP but to scale up the forecast rate of inflation. Professional forecasters admitted that the 1980 outlook was far from being firm and was indeed one of the most perplexing in the relatively brief history of economic forecasting.

Iran-Afghanistan and the end of detente

It is not difficult to speculate on the reasons for the lack of clarity and firmness in the year-end 1979 outlook. The uncertainties were of course aggravated by the unfolding Iran-Afghanistan-Persian Gulf crisis, by the apparent end of detente, and by the ominous possibility of a wider spreading political-economic crisis leading to grave threats of curtailment in the nation's—and the world's—available oil supplies and growing military involvement. But basic uncertainties are also inherent in the technical capacities of the modern art of econometric forecasting, which have recently undergone a period of severe buffeting of their simultaneous equations based on past relationships and, in any case, have their severest test in handling turning points in the economic cycle, particularly under novel and untried circumstances such as the present.

Challenge to the consensus

The earlier consensus—uneasy and tentative as it was—was shaken by new economic signals appearing in December 1979 and January 1980. In the face of the more austere Federal Reserve monetary and interest rate policies emerging on October 6, 1979 (the beginning of the new Volcker era) and mixed domestic economic trends including important ones that were clearly recessionary in character, the U.S. economy began to display an unanticipated "resiliency" and "robustness."

The rate of unemployment declined in November 1979 to 5.8 percent from 5.9 percent in October. This heartening piece of economic intelligence was hardly consistent with the oncoming recession theme; although quibblers could point out that while total employment increased at the same time, its rate of increase slowed.

Robust consumer spending

Another pleasing, but to the consensus forecaster discordant, signal was the report of a sharp rebound of retail sales in November 1979, which reflected a 1.8-percent increase as against a 1.7-percent decline in October. Moreover, as reported in the financial press, the revival of consumer sales was apparently broadly based, covering a considerable range of industries and economic sectors. This robust new note was interpreted by some financial press commentators as presenting or continuing a policy dilemma for the Administration in its upcoming economic and budgetary decisions, particularly with respect to whether tax cuts should be included in the January budget plans.[2] Those inclined to discount the consumer sales rise suggested that expectations of future inflation and supply disruptions rather than basic, healthy consumer confidence underlay the disconcerting upturn in the sales totals.

Mixed signal effect

The mixed signal effect was somewhat enhanced by a 1-percent increase in business inventories that developed in October 1979, followed by a 0.7 percent rise in November. An inventory increase is a form of investment that itself constitutes a stimulative income-contributing factor in the standard neo-Keynesian national income analysis. But an inventory change contains ambiguities with respect to the circumstances that produced it. If it represents a healthy response to an increase in consumer sales, it is part of an expansionary process. But if it is interpreted as reflecting an involuntary accumulation due to an imbalance between business output or purchases and sales, it may be regarded as a harbinger of future production cutbacks. Inventory liquidation is a possible sequel that is a recessionary disinvestment factor. Analysts who looked at the October 1979 rise seemed to conclude that it was not an indicator of a

serious imbalance. Moreover, the November development suggested that inventories were not out of line and were "lean," forestalling a possible "massive liquidation," such as occurred in the last recession in 1974-75. On questions raised with respect to the special problems of the U.S. auto industry, more will be said in a later section.

Seeking for a sign

In spite of the persisting basic consensus that the nation faces a recession in 1980—mild, moderate, or moderately severe, depending upon the semantic shadings of the particular forecaster—the net result of the mixed economic signals and some irresolution in both economic theoretical equipment and forecasting techniques is that there is still confusion and uncertainty among analysts over the continuing stubborn strength of the economy as of mid-January 1980. There are indeed skeptics with regard to the long-promulgated, long-delayed recession developments. Administration policymakers still were left in the position of awaiting a clear sign that the expected recession had actually materialized. According to observers, such a sign would have to be a definite increase in the unemployment rate, in contrast with what is regarded as the inconclusive pattern of month-to-month variations that occurred throughout 1979 and some months before. Unemployment still probably outcompetes inflation for the title of the most socially painful symptom of economic illness and a key item in the continuing and sometimes too complacent policy trade-off between unemployment and inflation.

B. *Is the 1980 recession real?*

Doubts as to the reality of a 1980 recession

The lingering uncertainty about the recession consensus is well illustrated by the treatment in the Citibank's *Economic Week* of January 14, 1980, which begins with a heading: "Can We Sideslip a Recession?"[3] The questioning of the consensus view is based upon the initial observation that the U.S. economy has much more momentum behind it entering 1980 than earlier data had suggested. This momentum is evidenced by the December 1979 employment-unemployment figures, strong retail sales, a lengthening of the manufacturing workweek, and a probable rise in industrial production in December 1979 in the 0.5- to 1.0-percent range. Recognition was given to the announcement by the U.S. Commerce Department's chief economist Courtenay Slater of a 2- to 3-percent annual rate increase in the GNP, stemming largely from the year-end rise in consumer sales. All this strength emerged in the face of layoffs in the auto industry and rising claims for unemployment compensation. While

the *Economic Week* questioning admits the possibility that real growth of GNP may continue into the early months of 1980, it concludes that only a fortunate and highly unlikely combination of developments could discredit the standard recession forecast for 1980. Recessionary factors cited include weakness in the housing industry due to high interest rates and tightness of mortgage money, slowness of defense orders in bolstering a sagging economy, dampening effects of the Soviet grain shipment ban, and restraints on state and local government expenditures due to the various budgetary restrictions. The only bright spot this analysis could conjure up as a source of sustenance to the predicted declining economy of 1980 was consumer spending, supported by either rapid money income growth or a slowdown of inflation which would enhance real buying power. The *Economic Week* analysis doubted either source of possible growth of real consumer purchasing power and adduced a final pessimistic uncertainty about the value of the dollar on the foreign exchanges, which could invite further tightening of the Volcker monetary-interest rate policies. Ending on a final ambiguous note, the analysis took the stance that even if there were an increase in real output in 1980, it would be weak and would not constitute "prosperity." Inflation would ease only slowly—in 1981 and after. By February 11, 1980, *Economic Week* was hedging its bets further. It adhered to its basic recession forecast but conceded that the probabilities had shifted to a one-in-three chance that there would be no recession in 1980.

C. *Post-Afghanistan revisions: official and unofficial views*

A sampling of high official thoughts

As the economy continued to expand, particularly as reflected in a 1.4-percent real increase in GNP in the fourth quarter of 1979, White House Press Secretary Jody Powell reported that the economy "has shown itself to be stronger than most people expected." With the exception of automobiles, the U.S. economy was seen to be entering 1980 with a "relatively good balance between (inventory) stocks and sales, which should be helpful in keeping the downturn from being sharp and of great duration." Regret was expressed that the personal savings rate had dropped because it reflected inflationary expectations, representing an inflationary psychology leading to higher consumer spending that will breed still more inflation "unless we're able to turn it around." At the same time, Courtenay Slater was reported as saying that consumer spending was largely responsible for the recent persistent real GNP growth rates: "It was the consumers that kept us out of recession." As Dr. Slater expanded

on this theme: "It was not that consumer spending was booming, which it was not. But compared with what we might have expected, given the squeeze on real incomes because of higher oil prices and other factors, consumer spending was stronger than what we suspected." Still she averred, "I think that we have to view some brief and moderate recession in the first half of this year as fairly inevitable." Apparently this latter qualification was in line with advance views of the official Administration forecast for 1980, to be released with the 1981 budget on January 28, 1980, which was expected to predict a recession with unemployment rising to about 7.5 percent by the fourth quarter of 1980.[4]

In other official quarters, the outlook for the recession—already widely recognized as delayed and possibly mild—was reviewed by Secretary of the Treasury G. William Miller in the light of new international tensions and the prospect of stepped-up military spending. In a recent interview reported on January 19, 1980, Secretary Miller indicated his belief that the expected recession would be "a little shallower and a little shorter" as a consequence. Moreover, he indicated, the new expansionary thrust of the economy caused by the renewal of cold war with the Soviet Union would make a tax cut "in these uncertain times" even less likely.

Secretary Miller's assessment of the latest prospects for a shallower, shorter recession in 1980 was said to be based on his opinion that the economy is likely to be spurred by a psychological pickup. Still, the forthcoming budget for fiscal 1981 would be based upon what was characterized in the press report as "classic economics": The underlying assumption predicts a moderate recession through the first half of 1980, with a second-half recovery, although the outlook had been changed by the "disturbances in the Middle East" and their possible escalation. Pentagon purchases could be expected to accelerate in order to improve preparedness, thus creating an earlier impact on the economy, whether or not total defense spending was pushed beyond the already planned real growth level. Another factor cited by Secretary Miller: Both businesses and consumers would react to the potentially explosive world situation by making investments and purchases that otherwise might be made at a later date. As Secretary Miller put it: "This is the tendency of human nature. You see a snowstorm coming, you get an extra bottle of milk." Yet, the Secretary indicated, the cost of increased military preparedness would not add to inflationary pressures because other programs would be held down. As a result of this displacement, "The new budget overall on an inflation-adjusted basis has no increase in spending in fiscal 1981," according to Secretary Miller's prediction.[5]

The January 28, 1980, *Business Week* reported that "business holds firm despite the downbeat forecasts"; while economic statistics were reported as continuing to point toward a softening in the economy, business "stubbornly refuses to take the fall." Superficially contradictory notes were detected: A low level of consumer and business optimism was reported for December 1979, with a reduced inclination to spend. Yet, with all this caution about the future, actual spending overall had not yet declined, except for autos and, in the immediate prospect, housing. Incomes were being sustained by employment gains, spreading even into manufacturing, where a decline had previously been generally anticipated. On top of all this, the latest surveys of consumer attitudes disclosed "some worsening both in how people view the future and their spending intentions." An example was given by the consumer sentiment index of the University of Michigan's Survey Research Center, which was reported at near record low levels, as revealing evidence of a decline in the anticipatory or "buy-in-advance" psychology that had previously been a prop to 1979 buying by consumers.[6]

Experts differ; some begin to "backpedal"

Business Week's January 28, 1980, "Economic Trend" featured a significant article announcing: "Recession Prophets Start To Backpedal." Late 1979 economic results, it indicated, had caused forecasters to "question the validity of results churned out by their computers" and to "wonder about the inevitability of the 1980 recession." Its highlights also included reports that several economists are now turning out "no-recession forecasts." A brief summary of these forecasts and the probabilities attached are set forth below:

- Otto Eckstein of Data Resources Inc. (DRI) indicates that the odds are "10 percent and rising" that a recession will not occur.
- Michael K. Evans puts the probability of no recession at 25 percent.
- George L. Perry of the Brookings Institution expects a slide into recession but allows a 33-1/3-percent chance that it will not occur.

One oblique but important comment on standard forecasts and their current troubles with consumer spending behavior, which defies the behavioral assumptions underlying forecasting models, is by Federal Reserve Board Chairman Paul A. Volcker in a January 15, 1980, news conference, "We're off the map in terms of established economic relationships of the past."

Those who adhered firmly to the recession forecast include Lawrence R. Klein of Wharton Econometric Forecasting Associates. He, along with most economists, took the position that labor markets cannot remain strong with key industries like autos, housing, and farm-related industries affected by the Soviet grain embargo turning slack. The "ripple effect" of all this cannot be long delayed in their view.[7]

Ripple effect

Finally, a variant interpretive note appeared in late January 1980 that suggested that the "puzzling economy, stubbornly resisting recession, appears headed into a period of sluggish growth, which many analysts believe is the best path to a gradual reduction of the inflation rate." A "top Carter administration economist" was quoted as saying, "I don't see any fourth quarter (1979) numbers consistent with the view that the economy is heading into recession" but added that it's a "good bet" that there will be a downturn sometime in 1980. Another government analyst said, "We could be looking at an economy that's just moving sideways for the next few months."[8]

A puzzling economy

Sideways movement

D. *Events, forecasting techniques, and the twilight of neo-Keynesian macroeconomics*

There are obvious uncertainties in "external" events—economic policy, political, military, technological, and others—which may importantly shape the course of the nation's economy. Assumptions or forecasts about these exogeneous factors[9] are necessarily subjective and intuitive. An economic forecaster cannot be faulted for inability to foresee the unknowable, although uncertainties of this character may in effect swamp the finest technical efforts to predict the economic future. The most that can be asked in this regard is that the economic forecaster choose a realistic and tenable assumption or outline a range of possible developments, with some kind of probability weight attached to each alternative outcome of events, which can then be explored by means of the miracle of the computerized macroeconometric model.

The role of external events

It is important to have the best possible intelligence about the likelihood of these external factors. But the more immediate and practical concern of the economist, the economic policymaker, and the concerned citizen is the probable response of the economic system to exogeneous factors. Here we find another source, another type, of uncertainty. It is essentially the same as the uncertainty, the loose-jointedness, we encounter in examining the ability of the forecaster to predict directionally and quantitatively the

Past relationships cannot be relied upon

unfolding of the economic cycle in terms of its own forces, vectors, and internal dynamism. Past relationships do not necessarily afford a guide; and in many areas, large and small, they may clearly no longer operate. The economy no longer seems to follow the accepted rules. There is no assurance, for example, that a recessionary decline in demand and production volume will reduce the inflation rate. The various institutional "ratchet" effects seem to prevent prices from declining. Upward movement is easy but reverse changes, including compensatory price declines in some areas in response to price increases elsewhere, seem difficult. Pricing policies of business are perverse by conventional price mechanisms standards. If demand recedes so that overhead costs are spread over a smaller volume, there may well be a price increase response. Spontaneous oligopoly-type[10] price increases are easy where inflation makes overpricing error less likely or, at worst, ephemeral. New economic behavior patterns—new, not well-recognized economic forces—seem to be emerging. Even seasoned forecasters are constrained to fall back on the explanatory excuse: This or that part of the economy seems to "have a life of its own." The "life-of-its-own" syndrome may have overtaken the whole economy as we enter 1980.

Perverse economic mechanisms

The old trade-off rules on economic growth and inflation falter

The old trade-off rules, which guided the neo-Keynesians in managing employment and the prices, have faltered and have an uncertain validity for the 1980's. These rules of thumb, based on empirical observations over the years, such as the Phillips Curve and Okun's Law, no longer give assurance as to the key relationships which can be expected to prevail, for example, between unemployment and inflation rates or between employment/unemployment and GNP growth rates. At best, they need overhaul and reformulation.

Is the neo-Keynesian world entering its twilight?

The neo-Keynesian world relied upon the bold but seemingly reasonable principle that if effective demand is expanded to absorb unutilized human or other resources, output will respond upward and idle resources will be drawn into the orbit of economic activity with relatively little inflationary slippage. In the late phases of the Great Depression of the Thirties and in much of the early postwar period, the Keynesian aspirations were substantially realized, although an ominous premonitory low-rate price upcreep soon developed. But for various reasons not all understood, the neo-Keynesian approach encountered difficulties. The economy became hypersensitized to inflationary pressure. A considerable margin of unemployment resisted aggregate expansionary methods. The unemployed of the 1970's were not the same as the previously employed and ready-to-return-to-work brigades of the Thirties and postwar Forties.

E. *Definitional problems*

Still another source of difficulty and uncertainty in predicting and managing the economy of the early 1980's is the apparent loss of relevant definition or measurability of such vital variables as the quantity of money, unemployment, and even price levels.

The effective money supply may no longer be relevantly and reliably defined as the sum of currency in circulation and checking accounts or as this sum plus time and savings deposits in commercial banks. There has been only recent recognition that in a world of credit cards, insured and highly liquid savings and loan accounts in thrift institutions—possibly with telephonic transfer arrangements, liquid balances with money market funds, and other developments—the money concept is blurred. More comprehensive measures may be and have been developed, but their relationships to price levels require further exploration.

Redefining the money supply

In keeping with this general comment, critics have contended that interpreting the money supply numbers "has of late been a dicey game,"chiefly because the "current monetary measures are notoriously obsolete." The Federal Reserve's revision of the monetary supply figures in late 1978 has been regarded by many as a failure. Under this system, M1 is currency plus demand deposits; M1+ is M1 plus savings deposits at commercial banks and checkable deposits at nonbank thrift institutions; M2 is M1 plus time and savings deposits at commercial banks other than large certificates of deposit (CDs); and M3 is M2 plus deposits at nonbank thrift institutions. The Federal Reserve has now sought to correct the situation by adopting a new series of money measurements early in February 1980. This is to include major changes in the basic series of M's, which are employed in judging the degree of control of the growth of the money supply. One early report indicated that the major change would probably be the publication of a "do-it-yourself" list of money supply components, including Federal Reserve estimates of a wide range of money quantity items—from the part of the Eurodollar magnitude (dollar accounts in European financial institutions)that affects domestic money growth to the changes money market mutual funds have caused in the way people are now saving money. The additional shopping list of money supply items would enable those dissatisfied with the old measures to "roll their own" according to a quotation from Federal Reserve Governor Henry C. Wallich. Another change is said to be the introduction of a novel money measure to be called L, for liquidity, embracing all types of liquid assets, apparently adding up to several trillion dollars.

Possible confusion due to the shift in the data design is to be dealt with by a "benchmark" series of growth rates for the new monetary aggregates going back to 1973.[11]

How measure unemployment and inflation?

This lengthy exposition is not entirely a digression since it gives specific substance in a major area to the point that uncertainty prevails now and will prevail in the future where the data used and the shape of the economy being forecast are in doubt, under discussion, or in transition.

Unemployment may be overstated by people relaxing between jobs and understated by the numbers of frustrated people who give up trying to get jobs, by the partially employed, and by the underemployed. Employability is affected by legal and union-determined wage standards. Employment in the underground economy may affect the significance of employment data.

The long-accepted and respected measures of consumer price levels have been subjected to challenge. Technical details, such as the weighting of housing purchases in the housing budget items, are said to overstate inflation as a measure of the typical consumer's market basket. The rude intrusion of OPEC oil and related fuel and energy prices is said to misrepresent the inflationary process to which normal restraining or stabilizing instruments should be applied.

The skepticism about the CPI has recently been met head-on by the U.S. Bureau of Labor Statistics. Commissioner Janet Norwood has defended the present index against allegations by official and unofficial critics that it exaggerates the inflation rate, but has announced as forthcoming some five alternative "experimental" measures of the most controversial index component—the cost of home ownership. Any resulting revision of the basic CPI would be long in coming, the announcement made clear, since the CPI is the best available measure, has long been used, and forms the basis of various wage and other contracts with a cost-of-living adjustment (COLA) feature.[12]

All these technical matters will need continuing attention in the early 1980's. They merit some credence but cannot be resolved in a way that readily serves forecasting and economic management needs of early 1980.

FOOTNOTES

[1]Clark, Lindley H. *Wall Street Journal*, December 11, 1979. pp. 1, 20.

[2]See, for example, Rowe, James L., Jr., and Pine, Art. *Washington Post*, December 11, 1979. p. D1.

[3]"Can We Sideslip a Recession?" Economics Department. *Economic Week*. New York: Citibank, January 14, 1980.

[4]Berry, John M. "GNP Increases 1.4 Percent in 4th Quarter." Business and Finance Section. *Washington Post*, January 19, 1980. pp. C7, C12.

[5]Rower, Hobart. "Miller Sees Shallower, Shorter Recession." Business and Finance Section. *Washington Post*, January 19, 1980. pp. C7, C12.

[6]Franklin, William B., editor. Business Outlook Section. *Business Week*, January 28, 1980. p. 31.

[7]Jonas, Norman, and Wildstrom, Stephen H. "Recession Prophets Start To Backpedal." Economic Trend Section. *Business Week*, January 28, 1980. pp. 38-39.

[8]*Wall Street Journal*, January 21, 1980.

[9]An *exogeneous* factor or variable is usually defined as one which, although it may play an important role in an economic scenario, is basically determined by forces originating outside the strictly economic framework and is not explainable or predictable in terms of the economic framework or "model."

See, for example, Bannock, Graham; Baxter, R.E.; and Rees, Ray. *The Penguin Dictionary of Economics*. New York: Viking Press, 1972.

[10]*Oligopoly* represents a situation in which there is market concentration—relatively few producers or sellers. The recognized interdependence among the decisions of the firms permits prediction of competitors' responses to price initiatives and fosters a qualified element of monopoly pricing based on business game strategy without actual collusion. Product differentiation and brand loyalties enhance the monopoly element.

[11]The foregoing preview of changes in the money supply data—since largely accomplished—relies heavily upon a news article entitled "The Fed Tries To Get Its M's Together." *Business Week*, January 28, 1980. pp. 37-38.

[12]Norwood, Janet. Speech given before the National Association of Government Labor Officials. As reported in the *Wall Street Journal*, January 22, 1980.

III. Limitations of Macroeconometric Forecasting

A considerable part of the uncertainty in the immediate 1980 forecast situation stems from the limitations of the macroeconometric technique. A nontechnical background review of the methodology and problems of macroeconometric forecasting is presented in Appendix A.

Macroeconometric models are computerized systems of simultaneous equations based upon past observed relationships among economic variables. Their results reflect the interrelationships and interplay among variables in a way hitherto beyond the calculating ability or intuitive perception of the most gifted. They largely follow the neo-Keynesian approach to the national income, its components, and the mechanics of income generation. They have understandable difficulties in identifying and forecasting economic turning points. Like any forecasting technique, they have difficulty in identifying, predicting, measuring, and expressing the forces of human behavior and mass psychology, particularly in a novel and rapidly developing scenario.

Macroeconometric models are computerized systems of simultaneous equations; they can reflect the interplay and interrelationships among economic variables; can explore alternative scenarios; but cannot work magic. Turning points are difficult.

Macroeconometric models must rely upon a set of basic assumptions that depend in part upon external noneconomic decisions and events. They are efficient and make a great contribution in their ability to explore the implications of alternative assumptions. But the selection of the most probable assumptions and the assignment of probability weights to different options in a cluster of possibilities relies upon informed judgment, intuition,and, to a considerable degree, subjective choice. The choice of assumption scenarios, no matter how intelligent, may still leave the forecaster open to extraordinary surprise both in the form of unanticipated economic behavior and in the form of public policy or political events.

The major forecasters have compiled very fine records. Even if they err, and frequently they err together, they furnish a tangible, quantified scenario that interested observers and policymakers can discuss, dissect, and compare with their own more specialized view of economic events. A brief comparative performance rating of five major macroeconometric models, including Data Resources, Inc. (DRI); Chase Econometric Associates Inc.; Wharton Econometric Forecasting Associates, Inc.; and others, is presented in Appendix B.

IV. Uncertainties Surrounding Major Forecast Assumptions

The practical validity of economic forecasts relying upon macroeconometric models depends upon (1) the realism and substantial correctness of the underlying assumptions, (2) the applicability of the simultaneous behavioral equations relating dependent to independent variables based on past relationships, and (3) to an appreciable extent, the stochastic[1] analysis, which simulates the impact of random shocks so as to develop confidence bounds. A macroeconometric model may be technically excellent; but if assumed conditions do not prevail, the forecast operation becomes to that extent irrelevant. Moreover, the applicability of the behavioral equations and their resultant interplay may be adversely affected.

If 1979 was replete with surprises, inexplicable economic strength, and mixed signal effects, 1980 promises to be similarly, if not more, unpredictable. Let's examine briefly some of the basic assumptions upon which economic forecasting of GNP, inflation, employment, and other forecast variables depends heavily. The nature of the aura of uncertainty around key assumptions is evident almost from a listing of the areas of policy commitment and "external" economic forces involved:

- Fiscal policy and budgetary posture
- Monetary policy and interest rate structure controls
- Petroleum and other energy supplies and prices
- The value of the dollar on foreign exchanges, the state of world economies, and the U.S. balance of international payments.

Much of the forecast rests in the hands of these assumptions, which deal with things with great potential for the unknowable and necessarily embody intuitive judgment as to what is reasonable and plausible. In some circumstances, the assumption virtually governs the forecast.

A. *Fiscal policy and budgetary posture*

Both in its major components, tax revenues and expenditures, and in their subcomponents, the federal budget represents perhaps the single most

important assumption in forecasting the 1980 economy. Various approaches are possible in defining fiscal policy assumptions.

The Data Resources, Inc. (DRI), forecast as of mid-January 1980 recognized the cloudy budget policy outlook as the President prepared his Budget Message for delivery January 28. It assumed that in spite of significant tax debates in the election year, no tax cut would be adopted. It assumed the adoption of a windfall oil profits tax in January to yield some $2.7 billion in 1980, with substantially increasing amounts in later years ($8.5 billion in 1981 and $17.1 billion in 1982). It envisaged a substantial package of tax cuts and Social Security tax rollback, aggregating some $25 billion to be effective early in January 1981. Expenditures were assumed to undergo only a mild expansion in 1980, in response to the generally expected recession.[2]

Early assumptions and previews of fiscal policy and the budget for 1980-81

Prior to the Afghanistan invasion by Russia, press previews of the fiscal 1981 budget to be submitted late in January indicated that, pending a few final decisions, it would call for expenditures in the vicinity of $615 to $620 billion, with a deficit in excess of $15 billion. This figure compares with a $35 to $40 billion deficit then expected for fiscal 1980, ending Sept. 30. The 1981 budget was reported to include previously questioned $2.3 billion aid for state governments in the general revenue sharing program (possibly with stipulations for its use, i.e., aid to local governments) plus $4.9 billion in revenue sharing aid to cities, counties, and other local governments. The budget spending plans were described as cutting back on some domestic programs or curbing their growth, but not too severely.

Budget requests for defense were unofficially reported at $142 to $143 billion for fiscal 1981, up some 11.5 percent above the $127.4-billion level expected for fiscal 1980. These requests were to increase the outstanding obligational authority so as to push up the actual defense spending by $20 billion, or to more than $157 million in fiscal 1981, according to a presidential statement. As of mid-December 1979, these plans were to provide a "real" increase in the defense spending of about 4.5 percent in the next five years, as against the 3-percent real increase figure sought in the past few years.[3]

The mid-December proposals included improvements in strategic nuclear forces, naval modernization to support a rapid deployment force, long-range cargo aircraft, and supply ships loaded with Marine Corps combat equipment. The announcement recognized that "the 1980's are likely to bring continual turbulence and upheaval" related to strains caused by

"problems of energy price and supply." These plans were then attributed by some observers partly to political requirements for the still pending U.S. Senate ratification of the SALT agreement but also to the increased depth of international stress precipitated by the Iran hostage crisis.

The mid-December budget plans probably understated defense spending increases, since such projects tend to unfold gradually in the various legislative and administrative phases and subsequent cost overruns are a real possibility.

By mid-January 1980 the Administration's reported fiscal year 1981 budget was being characterized as "obsolete before it surfaces, a stillborn victim of the new cold war." Commentators reported that, whatever last-minute increases for defense were inserted in the 1981 budget, the U.S. Congress would raise the ante, including taking a look at reviving the military draft. An incipient boom in defense spending was said to be gathering force; defense stocks were strong in the securities markets. The former $615-billion fiscal year 1981 budget (versus receipts of $600 billion) was regarded by experts as too low. Receipts estimated on the basis of a modest recession were also considered outmoded by probable stimulation of economic activity and GNP.[4]

It is not necessary to belabor the range of possibilities in the level of defense spending in the next year and the next five years. It is very large. But defense is not the only area in which unusual budgetary uncertainties prevail.

Large and unprecedented range of budgetary possibilities

The essential situation with which the nation is confronted involves a large and probably unprecedented range of adjustments both to military and security-type demands and to economic change due to oil price and availability problems and to anti-inflation/antirecession/antidislocation measures. Government may be called upon to ameliorate the effects of harsh economic cutbacks, for example, in the automobile and steel industries, the housing field, and the agricultural industries affected by the Soviet embargo. High interest rates will probably continue even after the supposedly peak levels of late 1979 are moderated; and the impact of such interest rates on housing may call for government intervention.

Economic dislocations and adjustments may be expected to call for a variety of social and welfare programs to assist people thrown out of work and businesses compelled to shut down or curtail their operations. The

severity of these demands would depend upon the overall tone of the economy and the depth and duration of the anticipated recession, itself still an unknown quantity.

Some tax cut package possibilities

On the taxation side of fiscal policy, the possibility of tax-increasing and tax-decreasing measures under the pressure of economic and political developments cannot be dismissed. As of mid-January 1980 the prospects for broad tax cuts in 1980 seemed to be dim at best. Still, it was thought, influential groups in the business community might yet press for early enactment of tax reduction and incentives to "spur productivity and offset inflation." A Business Council tax package developed by the Business Roundtable in mid-December 1979 called for a $25-billion tax reduction[5] as follows:

Business tax cuts	$ 7 billion annually
Individual tax cuts	$18 billion annually
Total	$25 billion annually

The business component included liberalized depreciation on the 10-5-3 plan (10 year write-off for buildings, 5 for machinery and equipment, and 3 for light trucks) plus 1 or 2 percentage points off across the board for the corporate income tax. For individuals, the plan provided for rate schedule adjustments to compensate for inflationary increases in the burden under progressive rates.[6]

While these proposals seem unlikely to be enacted in view of the mid-January outlook for a brief, mild recession, if any at all; continuing inflation; and new demands for defense spending, they cannot be dismissed if there is a sag later in the year. Other tax possibilities not to be excluded include additional gasoline or petroleum taxes to assist in conservation and rationing of scarce supplies, special tax adjustments to permit recycling of windfall oil tax revenues, and even a shift to value-added tax (VAT) to bolster and replace payroll taxes for Social Security, as proposed by Chairman Al Ullman of the House Ways and Means Committee.

B. *Monetary policy and the interest rate structure*

A major economic factor still in a state of unprecedented break with the past and continuing adjustment is the monetary-interest rate policy of the Federal Reserve following the sharp tightening initiated by Chairman Volcker in October 1979.

The new monetary and interest rate policy—questions on its rationale and effects

The rapidity with which monetary variable forecast assumptions had to be changed in the last two quarters of 1979 presages the kind of uncertainty that must perforce prevail with respect to any assumptions made for monetary policy for 1980.

The mid-January outlook in general supported the assumption that an austere monetary policy would be continued well into 1980, until the recession and natural supply-demand conditions for money permitted and favored some relaxation after mid-year 1980. Assumption of this general character underlay the DRI forecast of January 1980.[7] By mid-February an upward movement in interest rates was becoming evident.

The prospects for a milder, briefer recession or a slow-growth pattern, with expanded defense spending, the possibilities of dollar weakness connected with international money flows or speculation as part of the repercussions of the gold frenzy,or continuation of the inflation crisis could forestall any softening of the rigorous monetary policy of the Federal Reserve dating from the Volcker new monetary policy (NMP) initiative of October 6, 1979.

Does it seek to cure inflation with a mild dose of recession?

If there are uncertainties about the rationale of the NMP, there are likely to be uncertainties about its future role and possible modifications. Obvious questions are raised with respect to it on a conceptual basis. Is it an expression of Friedmanesque monetarism, designed chiefly to reduce excessive accommodation of money and credit demands on the money creating mechanisms of the Fed? Is it an up-to-date version of neo-Keynesianism stripped of its now inappropriate bias toward expansionism and inflation? Is it essentially a conservative crisis measure designed chiefly to use the interest rate structure to slow borrowing and investment, combat inflation, attract international funds, and strengthen the foreign exchange position of the dollar? Does it embody the idea of halting inflation by embracing unemployment and possibly moderate recession? Is it tenable to assume very prolonged continuation of repressively high interest rates? Will it prove necessary to "make exceptions" for the relief of housing, small business, and other areas that would hamper its intended

function? Is it reasonable, on the other hand, to assume that it will be feasible in terms of the rationale of the NMP to ease rates merely because of slackening of heavy loan demands? Will not foreign exchange/balance of payments problems and continuing inflation call for very high, possibly rising rates? And the overriding uncertainty is whether we know, in a stagflation situation, what a really high interest rate is in terms of real vs. nominal rates with the CPI rising at a 12- to 14-percent annual rate. Perhaps the NMP has, in fact, merely explored a stratum of nominal interest rates, which begins to touch on a positive real rate in the more traditional range of 3 to 6 percent.

C. *Energy prices and availability*

Energy costs and supplies, with emphasis on imported petroleum, have a major bearing on economic growth, productivity , the inflation rate, the balance of international payments, the value of the dollar, monetary policy commitments, and other aspects of the economy of 1980 and beyond.

The year-end outlook for petroleum prices is colored by several factors: (1) failure of OPEC members to reach a uniform pricing structure at the Caracas, Venezuela, meeting, (2) substantial oil price increases and basically tight supply conditions in 1980 and beyond assumed by respected forecasters, (3) conflicting evidence adduced by some analysts to support the opinion that prices of petroleum are peaking in view of a supply-demand balance now developing that will necessitate production cuts by OPEC to avoid an oil glut and to support the general oil price structure.[8]

The Caracas agreement to disagree

The OPEC agreement to disagree left the world without a stable uniform oil price structure. Whether this means official sanction to chaos in world oil pricing may be argued. Oil prices were already being set and reset periodically by the OPEC cartel at levels generally designed to charge what the traffic would bear, all factors bearing upon oil politics considered. The Caracas meeting adjournment without fixed price agreements will permit each OPEC producer to set its own prices, i.e., to determine its own price differential from the then prevailing $24 per barrel to be maintained for the time being by Saudi Arabia for its "light marker crude." Oil is not homogeneous; there are various grades, qualities, and characteristics, including processing costs, that justify price differentials. The new arrangement also apparently allows quicker, less "cartelocratic" price adjustments and permits each OPEC member to exploit spot market transactions and other more flexible dealings.

Oil prices must, of course, be assumed to increase in 1980 both because of OPEC pricing and because of domestic petroleum price decontrol. The DRI forecast as of January 1980 assumed that OPEC prices would average some $27 per barrel in 1980 versus some $23 per barrel late in 1979, rising to $31 per barrel in 1981 and $35 per barrel in 1982. Other features of their assumption were—

A range of views on oil prices and supplies

- An average 26-percent annual rise in wholesale energy prices
- Price-induced conservation and supply constraints causing a moderate (about 6 percent) drop in oil imports in 1980 and 1981 as against 1979
- A rise in domestic crude oil prices by over 60 percent in 1980 over 1979, with further substantial percentage increases in store for 1981 and 1982.

DRI assumed that world petroleum prices would remain tight, supporting upward pressure on prices, but that there would be no major supply shortfalls in 1980.[9]

The Heller-Perry letter of January 21, 1980, regarded the Middle East situation in 1980 as even more ominous than before. It indicated that, after a momentary glut, we cannot count on adequate oil supplies even at OPEC prices of $30 per barrel. More specifically, their forecast assumed oil price increases now scheduled by OPEC coupled with a 50- to 60-percent rise in domestic oil prices, but made no allowance for "the shortages or possible rationing that would accompany a major interruption of supplies."[10]

The optimistic oil price forecast by Lawrence Chimerine of Chase Econometric Associates, which suggests that the oil price spiral may have ended or settled down to a steady tie-in with world inflation rates, echoes the momentary glut in the early months of 1980 mentioned in the Heller-Perry treatment. It underscores still another possibility in the recognized spectrum of possible energy price and supply conditions for 1980.

Another forecaster, Citibank's *Economic Week*, outlines a still different view of 1980 oil price and supply developments. It regards the OPEC failure to agree on its benchmark crude oil price as not discontinuing its rule over the world oil market and as getting the U.S. "over a bigger barrel." Still, given likely production levels, *Economic Week* suggested that market forces will tend to establish a new equilibrium in the $26 to $27 per barrel range in 1980. These prices are expected to depress OPEC oil exports but to offer "little challenge to its ability to set minimum oil

prices." *Economic Week* estimated only a 2-percent reduction of U.S. oil consumption in 1980. Barring a substantial Iranian oil export cutback, *Economic Week* felt the 1980 oil market, in the midst of a weakening world economy, "would provide the OPEC moderates with an opportunity to reassert their influence on oil prices." But, it indicated, OPEC will be able to defend the $24 per barrel minimum agreed upon in Caracas "in the face of any plausible reduction in 1980's oil demand."[11]

A pessimistic caveat

An essentially more pessimistic view of oil price and supply conditions is expressed by John F. O'Leary, former U.S. Deputy Secretary of Energy. He envisages the 1980's as a period harsher by far to the consumer than the unkind 1970's. He sees the decline of the strategic cushion of surplus-producing capacity. He sees a "crossover" into a world of permanent petroleum shortages—once expected to occur only in the mid- to late-1980's—as being now at hand, in light of manifestations of oil production cutback tendencies in many oil producing countries apart from Iran. Price impacts are rated as less serious than the disruptive effects of even relatively small supply interruptions and the spillover into social unrest and possible military action.[12]

Conservation and substitution effects

Another caveat with regard to energy price and supply-demand conditions: price-induced conservation to date has been short-run and limited by the existing stock of transportation and heating equipment. As the time span for adjustment by consumers and users of fuel for automobiles, home heating, and industry increases, the inertia of past utilization patterns will be overcome. For example, as the huge gas guzzlers are gradually removed from the highways, the way will be made easier and safer for smaller and lighter vehicles. Greater technical flexibility and adaptation than expected may occur even within the next couple of years and that will improve upon the modest conservation and substitution effects witnessed to date.

D. *The status of the dollar and the state of world economies*

Some macroeconomic models and other forecast systems need to make certain assumptions relating to forces affecting the external purchasing power of the dollar—its exchange rate. These assumptions necessarily take account of the prospects for both (1) the role of the dollar as a reserve asset and as an oil pricing vehicle and (2) the international trading relationships and capital flows that affect the balance of payments and the exchange value of the dollar.

DRI's forecast of January 1980, for example, indicated that uncertainties over the dollar's position as a reserve asset currency have already weakened its value on the foreign exchanges. It assumes a depreciation in the dollar's "trade-weighted exchange rate" at an annual rate of 1.4 percent in the period 1980-82. This depreciation, of course, reflects both the expected high U.S. inflation rate and the persisting or growing trade imbalances. One factor in the assumed trade imbalance is a projected slowing in the composite growth rate of "our industrial trading partners" to 1.2 percent in 1980 versus 4.7 percent in 1979, to be followed by recovery back to 1979 levels by 1982.[13]

Expert views on the weakening of the dollar

The Heller-Perry 1980 economic outlook letter of January 21, 1980, did not make explicit assumptions about the depreciation (or appreciation) possibilities for the dollar on foreign exchanges. Certain other assumptions or projections it made—for example, about oil prices and productivity of the labor force—have an unfavorable bearing on the exchange value of the dollar in 1980.[14] Earlier sanguine reports in the Heller-Perry outlook letter on exports and the trade balance, relying in part on bumper crops and the Soviet market, looked to continued improvement in the trade balance in 1980.[15]

The earlier Heller-Perry outlook letter of October 5, 1979, did, however, deplore the use of high interest rates spurred in part by renewed "dollar jitters." It observed that the Federal Reserve's interest rate boosts had not succeeded in removing pressure on the dollar and attributed the then emerging scramble for gold and other precious metals to uncertainties about the dollar and world inflation prospects. Speculation in gold, silver, and copper had been spurred especially by Arab buying. Among other things, the Heller-Perry analysis went on to put down anxieties, deemed particularly misplaced in the case of major industrial nations, that the gold price explosion would have dangerous effects by boosting foreign exchange reserves and thus relaxing policies of economic restraint. The gold fever, in Heller and Perry's opinion, should have no significance for U.S. economic policy decisions, except as a "mirror of inflation, speculation, and footloose money that keeps the dollar under pressure." In their view, the gold fever was a painful reminder that defending the dollar, in accordance with the November 1978 pledges by the White House and the Federal Reserve, involved costs in the form of slower growth and deeper recessions. Their conclusion as of October 1979 seemed to be that the self-corrective forces of deepening recession in the U.S. and slowdowns in foreign economies would reverse the upswing in interest rates. This conclusion seemed to leave the reader with the impression that Heller and

High interest rate to cure "dollar jitters" criticized

Perry did not regard the defense of the dollar as a big objective and looked forward to the automatic easing of the dollar problem along with high interest rates by the expected widespread recessionary trends in 1980.[16]

Possible switch to other currencies for essential international transactions

Hints of switches from the dollar to the German mark or the Swiss franc as the medium for pricing oil and "storing" the enormous proceeds of oil sale transactions have appeared in the financial news. But the possibility of such a switch on a big scale seems to raise anxieties on the part of these hard currency countries that the new role would impose heavy, if not intolerable, burdens that would handicap their domestic monetary management more than it would help the dollar. Nevertheless, this possibility, along with high gold prices, underscores the depth of international tension and uncertainty about international monetary institutions and mechanisms.

Is gold fever dangerous?

The easing in the price of gold as of January 22, 1980, was followed by the major gold price "correction" on January 23. This, possibly with the aid of the damping of silver speculation by curbs imposed by the New York and Chicago commodity exchanges, seemed to promise at least temporary relief from whatever pressure on the dollar might be considered to stem from speculative excesses and irrational pricing in the precious metals area. Gold prices, U.S. gold policy, and their broader implications for the U.S. economy still remained sources of uncertainty.

A listing and brief discussion of some neglected contingencies and policy options are contained in Appendix C.

FOOTNOTES

[1]A *stochastic* model is one that includes error factors in its equations to reflect inexactness in the relationship between dependent and independent variables and thus helps provide a kind of shorthand representation of what may develop in complex situations.

Cf. Greenwald, Douglas, and associates. *The McGraw-Hill Dictionary of Modern Economics*. New York: McGraw-Hill Book Co., 1965. p. 489.

[2]Data Resources, Inc. *The Data Resources Review of the U.S. Economy* (Lexington, Mass.), January 1980. p. 1.6.

[3]Bacon, Kenneth H. *Wall Street Journal*, December 13, 1979.

[4]Rowen, Hobart. "Fiscal '81 Budget a Victim of New Cold War." Economic Impact. *Washington Post*, January 20, 1980. pp. 61-62.

[5]Parts of the Business Council tax package closely parallel the DRI fiscal policy assumption, with an effective date of January 1, 1981, previously noted.

[6]Levine, Richard J. *Wall Street Journal*, December 12, 1979.

[7]Data Resources, Inc., *Op. cit.*, p. 1.6.

[8]Chimerine, Lawrence (President, Chase Econometric Associates), as reported in *Business Week*, January 28, 1980. p. 24.

[9]Data Resources, Inc. *Op. cit.*, p. 1.6.

[10]Heller, Walter W., and Perry, George L. "The U.S. Economic Outlook for 1980." Minneapolis, Minn.: National City Bank of Minneapolis, January 21, 1980.

[11]Economics Department. *Economic Week*. New York: Citibank, December 24, 1979.

[12]O'Leary, John F. "A Future Without an Oil Cushion." *Washington Post*, January 22, 1980. p. A19.

[13]Data Resources, Inc., Op. cit., p. 1.6.

[14]Heller, Walter W., and Perry, George L., *Op. cit.*

[15]Heller, Walter W., and Perry, George L. "U.S. Economic Outlook and Policy." Minneapolis, Minn.: National City Bank of Minneapolis, October 5, 1979.

[16]*Ibid.*

V. Major Forecast Areas

This section reviews the prevailing forecasts in specific major sectors or aspects of the economy, including the inflation rate, GNP and its chief components, industrial production and capacity utilization, employment and unemployment, labor productivity, interest rates, the government sectors, selected major industries such as autos and housing, and others. Most forecast items of this type, as of late January 1980, have been geared to the consensus-type prediction of a recession in 1980. They will be presented subject to all the qualifications and reservations raised by the Middle East situation, the apparent end of detente, and the expected rise in defense spending. A number of the sectoral forecasts are interrelated, and coherent presentation is consequently complicated.

A. *Inflation outlook*

Inflation to continue at or close to double-digit rates

In general, forecasters predict that inflation will continue at double-digit rates through the first half of 1980; demand pressures are expected to ease slowly, particularly in view of the recent delay and amelioration of the recession outlook and the diffusion throughout the economy of higher fuel and gasoline prices due to the December 1979 oil repricing. Once the oil cost-push factor is absorbed and distributed and recession softens demand, inflation is expected to fall back to high single-digit figures. The average CPI inflation rate for 1980 as a whole is apparently expected to be in or near the double-digit range but below the above-13 percent figure racked up in 1979.

This summary closely parallels the DRI inflation forecast, based on its "control" or most likely forecast scenario.[1] It is also similar, but with some differences noted later, to the Heller-Perry forecast of January 21, 1980[2] and to an only slightly more recent forecast by Professor Heller.[3] The Heller-Perry approach factors together the various "building blocks" of inflation for 1980: (1) modest labor productivity growth and compensation increases, (2) OPEC and domestic decontrol oil price hikes, and (3) projected easing of mortgage interest rates. It comes out with an

average CPI rise of about 9 percent for 1980 as a whole, consisting of a 13-percent rate early in the year and a rate between 7 and 8 percent by the end of 1980. Professor Heller's own summary of this forecast is: "Yes, inflation will race ahead at its present pace, or worse, for several months as burgeoning oil costs continue to lift prices at the pump and the rise in mortgage rates continues to distort the CPI numbers. But, by mid-year, double-digit inflation should be behind us."[4]

Will recession really help curb price rises?

A recent *Economic Week* analysis of "what the downturn means for prices" examined the effect of different phases of the economic cycle on the inflation rate due to productivity and labor cost patterns, which it finds gives results at variance with traditional economic theory that recessions ease inflationary pressures.[5] The exposition explained that recent history showed that recessions have a strong negative effect on productivity. Thus in terms of cost-push inflation the anticipated recession would push prices up. However, it could "lay the groundwork for a future slowdown in the rate of inflation," since output per worker hour "typically surges ahead as soon as the recession has ended," thus reducing the rate of increase in unit labor costs. *Economic Week* also looks forward to some wearing off of the 1979 spurts in energy, housing, and finance costs, but not in substantial amount until the second half of 1980. This whole supply side analysis is qualified also by *Economic Week's* observation that the demand side is important and any substantial reduction in the general inflation rate would have to wait upon a "sustained slowdown in the rate of growth of the money supply."

Past tendency to underestimate inflation

Inflation forecasts have tended to err on the downside in recent years. Various factors other than technical error in forecasting equations are responsible. Some are quite understandable, such as unforeseen or underestimated events. Unconscious bias due to a desire to justify and defend intellectual positions on macroeconomic management and politicization are probable factors. The emergence of supply side factors, resistance of costs and prices to downward movement (ratchet effect), and inadequate comprehension of the impact of monetary accommodation seem to have played their part. The analyst must wrestle with various interacting, self-reinforcing components of inflation, such as the wage-price spiral. This involves comparisons of productivity and wage guidelines or other wage determination processes and gaging the inertial momentum of inflation. There are the mysterious costing and pricing policies of large corporations with market power to contend with. Recession effects on the cost-supply side are in conflict with the traditional role of contracting demand in the price equation. Consumer psychology and behavior and

the whole field of inflation-expectational economics need to be further explored and developed.[6] There are economic mechanisms that are neither fully understood nor quantified. All these points have some bearing on the 1980 situation.

As further background, a brief comparison of inflation, GNP, and unemployment predictions in two governmental forecasts for 1980-81 by the Congressional Budget Office (CBO) and the President's Council of Economic Advisers (CEA) is presented in Appendix D.

An interesting dissent from the consensus-type forecast for 1980-81, that recorded by the ARIMA technique (as developed by Data Resources, Inc.), is summarized in Appendix E.

B. *Gross national product*

GNP the heart of an economic forecast

The heart of an economic forecast is its prediction for the gross[7] national product (GNP)—the comprehensive measure of the nation's output of goods and services. This magnitude embraces the entire package of economic activities and its major components: personal consumption expenditures, gross private domestic investment, exports/imports, and government purchases of goods and services. The GNP in current dollars, with adjustment by the implicit price deflators for GNP, reflects both the overall GNP inflation rate and the real (inflation-adjusted) GNP. The treatment of GNP components and subcomponents in an economic forecast reflects the expected economic factors or trends that are expected to alter or support the overall economic movement.

The GNP forecast might seem at first glance to involve less risk than specific forecast items since it combines various sectors, the ups and downs of which may average out, or compensate each other. However, the GNP components are interrelated and to some extent mutually reinforcing.

The Heller-Perry 1980 forecast letter and the DRI control (most probable) forecast of January 1980 predict roughly comparable declines in GNP for 1980 but with significant differences. Let's examine them briefly.

The Heller-Perry forecast indicates that real GNP in 1980 will fall 1.2 percent below 1979, but the current dollar value GNP will be pushed up by

A range of views on GNP in 1980 and 1981

inflation by some 7.8 percent to over $2.5 trillion ($2500 billion). As of late January 1980 Heller and Perry were still forecasting very much as they did in October 1979—that the predicted recession would carry GNP down about 2.5 percent "from peak to trough." In the January 1980 forecast they refer to the GNP decline as a "slide" lasting most of the year. That this is a mild recession forecast is indicated by their October 1979 comparison of the 2.5-percent slide-off figure with comparable figures for recent recessions: 5.7 percent drop in 1973-75; 1.4 percent, in 1949; 3.3 percent, in 1953-54; 3.2 percent, in 1957-58; 1.2 percent, in 1960; and 1.1 percent, in 1969-70.

Heller and Perry stick essentially to the one GNP forecast that they term a "reasonable prospect," but they qualify it by the contingency that "an intensified military build-up could reverse the slide rather quickly." They give little or no attention to the possibility of down-side error—a more severe recession.

The DRI forecast predicts a decline in real GNP at an average 2-percent annual rate over the four quarters ended 1980: III, with recovery setting in late in the year. This forecast contemplates a current dollar GNP figure of some $2559 billion for 1980 as a whole, subject to an implicit price deflator in the 9.5-percent range. The DRI forecast for 1980 follows its usual forecast pattern of attaching probability weights to the control forecast (50 percent) and possible alternative scenarios. The DRI analysis as of January 1980 recognized only a 10-percent chance of a briefer, milder recession; it attaches greater probability (15 percent) to a deep recession, but still greater probability (25 percent) to a "boom-bust" scenario that would maintain increasing GNP real growth rates through the first half of 1980, to be followed by a sharp dip resulting in a negative annual growth rate (nearly -9 percent) in 1980: IV.

The Heller-Perry analysis views their moderate recession forecast as the resultant of several negative factors pulling GNP down in 1980 (a tightening federal budget, high interest rates and tighter credit, and oil prices equivalent to a $50 billion net drain on consumers' purchasing power) and a cluster of expected positive factors supporting or pushing up GNP so as to keep the recession "within moderate bounds" (an expected "mild inventory correction,"[8] underlying strength in housing demand, strong export performance, and the "mounting tide" of defense spending).

The DRI analysis contemplates a moderate overall fall-off or hesitation in consumer buying after its recent display of stubborn strength partly due to "hedge buying." After recent higher-than-anticipated levels, business investment in plant and equipment is expected to turn down. Other negative factors operating to pull the real 1980 economic level downward are the near double-digit inflation rate expected for the first half and the 9-percent range expected thereafter, a drop in housing under the pressure of tight money, and inventory corrections reflecting weaker markets. The DRI discussion concludes that the economy is not likely to regain momentum until early 1981.

Specific attention was given by DRI to a no recession or moderate growth scenario in the form of a special study.[9] The study concluded that if defense spending or private demand inflamed by inflation should push growth on through 1980-81, there would be adverse repercussions that would produce a worse recession later. These consequences are no improvement in inflation, higher interest rates, low savings rates, deterioration in business balance sheets, and other more serious risks: (1) OPEC responses to enlarging U.S. demands for energy, (2) weakened U.S. trade balance, and (3) accompanying dangers to the world monetary system.

In broadbrush, possibly oversimplifying terms, the Heller-Perry and DRI forecasts may agree on overall GNP results, but the policy conclusions they draw are different. Heller-Perry says, in effect, recession is coming unless defense spending "upsets the applecart," but recession will be a bad development because it will do little to ease the chronic inflation problems and will cause unemployment and failure to achieve the full U.S. economic potential. DRI also says moderate recession is coming (and the chances of a worse one are greater than for a milder one); but if moderate recession does not materialize because of a consumer buying splurge or defense spending, the results will be bad because inflation and stimulated energy use will lead to a graver future bringing-to-account and new OPEC pressures.

C. *Consumer spending*

Consumer spending the largest single component of GNP

Consumer spending is the largest single component of GNP, roughly 64 percent at recent levels. It directly reflects the current living standards and indirectly the personal savings rates of the people. It has a certain stability and is geared closely to consumer incomes, but it can show considerable

volatility and unpredictability at critical times due to changes in consumer mood and confidence, expectations, availability of credit, responses to products, the weather, attitude towards personal saving, and other factors. Apart from its sheer size in relation to the GNP total, consumer spending can encourage or dampen business investments in inventory and productive plant and equipment.

The January DRI control forecast of moderate recession in 1980 projects only a 1.7-percent decline in consumer spending over the first half of 1980, related chiefly to durables and energy-related items. Recovery is forecast later leading to a 3.1-percent annual growth rate in consumer buying in 1981 and 1982. Car sales are prominent in this aspect of the forecast. The consumption figure as a whole plays a prominent role in accounting for differences between the control forecast of moderate recession and alternative scenarios ranging through boom-bust, brief recession, and deep recession.[10]

The "surprisingly feisty" consumer

The Heller-Perry outlook analysis for 1980 recognizes the role of consumer spending, described as "surprisingly feisty," in staving off the recession in late 1979. The bulge in consumer spending was apparently at the expense of personal saving rates, which declined from 5.2 percent early in 1979 to 3.25 percent of disposable income in the latter half of 1979. This development was all the more surprising in view of the drop in auto purchases, which would ordinarily be reflected in higher personal saving rates. Heller and Perry believe that a considerable part of the sustained consumer spending was financed by the proceeds of new mortgages on existing homes, a source that will dry up. The Heller-Perry forecast is for a return of the personal saving rate to more normal levels of around 5 percent. For 1980 as a whole, Heller and Perry are of the opinion that consumer spending will grow about 9.5 percent over 1979 in current dollars—which, after correction for inflation, would represent little or no real increase.[11]

Consumer spending hard to predict

Uncertainties of consumer mood, reaction to inflation and world uncertainties, adaptation to energy prices and shortages, and access to cash flow from one not readily identifiable source or another make clear the risks in an economic forecast, especially for recession, in the present situation.

D. *Business fixed investment*

Importance of business fixed investment and its economic response mechanism

Business fixed investment, technically known as nonresidential fixed investment, represents business spending on plant and equipment (structures plus producers' durable equipment). Running at levels of about $261 billion annually in late 1979, it constitutes some 11 percent of GNP. Forecasts of this important variable reflect business confidence, the business community's perception of consumer demand trends in relation to existing capacity, the cost and availability of financing, and other factors, such as tax incentives and overall growth expectations. Business fixed investment is important for increasing efficiency and productivity. Under inflationary conditions, it is subject to a tax handicap due to the shrinking real value of depreciation allowances based on historic cost. Business fixed investment traditionally responds, with some lag, in multiple fashion to increases or decreases in consumer demand (sometimes called the "accelerator effect"). Business spending, in turn, has a "multiplier effect" on the economy because of the wider circulation of money incomes it generates and supports.

The Heller-Perry outlook letter of January 21, 1980, was quite firm in pronouncing that, in spite of large order backlogs for machinery and equipment and commitments for construction, "strength in this sector is ebbing."[12] Netting out a number of conflicting indicators in the capital spending area, Heller and Perry foresaw business fixed investment rising nearly 9 percent in current dollars, representing little change in real outlays after inflation correction. Their qualifications on this evidence of weakness were that (1) it was not expected to snowball as in the previous recession of 1974-75 and (2) it could be reversed in the event of military build-up.

A range of expert views

The DRI control forecast of January 1980 projected a definite decline of business fixed investment at a 4.8-percent annual rate over the next four quarters, with continued smaller declines in 1981 but strong recovery in 1982. The fall of nonresidential construction in 1980 was expected to be at a higher rate (6.5 percent) than that of the decline of spending on producers' durable equipment (3.9 percent).[13]

The Citibank's *Economic Week* as of mid-December 1979 was of the opinion that, while business capital spending had been one of the bright spots in the U.S. economic picture in the recent period, most recent surveys of business plans indicated that real capital spending may well have peaked and slower investment growth is likely in 1980. The recent

strength in capital spending was found traceable to transportation equipment. While aircraft buying would hold up, automobile buying was expected to be a "source of weakness." Its pessimistic conclusion: real equipment outlays would fall some 9 to 10 percent by mid-1980 and nonresidential structures would drop even more, by some 12.5 percent before it "troughed" in late 1980. While *Economic Week's* analysts regarded this as a mild decline, they warned that it could be greater if the recession turned out to be more severe than expected.

Business capital spending adds to the mystery of 1980 developments

The uncertainty and tentativeness in the business capital spending picture are given another fillip by U.S. Department of Commerce data released in late January, which showed that among other things, new factory orders for nondefense capital goods—regarded as a barometer of future plant and equipment spending—jumped 7.9 percent in December 1979 versus a 2-percent rise in November and a 3.7-percent decline in October.

Commenting on this new report, Courtenay Slater (the Department's chief economist) said that it "fits the pattern we've been seeing, but that pattern is somewhat of a mystery . . . new orders for durables certainly aren't strong, but they certainly aren't falling off and collapsing, either . . . all the underlying forces tell us we ought to be going into a recession, but there's very little in the data to back that up." Nevertheless, Dr. Slater added that she continued to believe that the combination of high energy costs and inflation, with its eroding effect on consumer's buying power, ultimately will produce a downturn in 1980.[14]

All these developments and comments confirm the now familiar question whether the long-predicted recession of 1979 will really occur but suggest a restatement: If there is eventually an economic downturn in 1980 as a result of inflation, OPEC adjustments, and similar disturbing factors, will it be the same recession previously forecast but merely on a delayed time schedule or will it, in fact, be a new phase of economic difficulty and readjustment?

E. *Inventory behavior*

Role of inventory accumulation and decumulation

Business inventory changes figure in most comprehensive economic forecasts. Indeed, one of the early classical theories of what was then called "the trade cycle" was based largely on waves of inventory accumulation and decumulation, and the resulting stimulus or destimulus to factories' payrolls, all under the partial governance of interest rates and credit supplies.

Business inventories, including wholesale and retail trade plus manufacturers' stocks and goods in process, represent a total in the $425 billion range.[15] Net changes in inventories represent investment (increases) or disinvestment (decreases). Relatively small percentage changes in the inventory figure contribute significant amounts to the business investment picture. Inventory holdings are essential to production and distribution; an adequate flow of goods in the pipeline smooths the production-distribution sequence, avoids interruptions and delays, and provides an important reserve for the economy. Inventories are kept in balance with sales and production flows but are affected by cost factors and expectations. Computerization and similar advanced inventory control procedures have helped economize on inventory investment. Higher interest rates have added to the costs of holding inventory, while inflationary trends may have tended to induce advance buying of inventory goods and materials. Top-heavy inventories are a source of instability since rapid liquidation would be a negative investment factor depressing production, employment, and the GNP. Lean inventories may reduce the risk of disorderly liquidation but under strong recovery conditions could lead to rapid accumulation fueling a boom.

Lean inventory positions reduce risk of volatile liquidation in recession

The Heller-Perry outlook letter of January 21, 1980,[16] observed that restraint in business inventories has prevailed. Allowing for the special increase in petroleum product inventories, Heller and Perry, like others, found a good balance in other inventory components with sales. They forecast inventory cutbacks (decumulation) in response to predicted weakness in retail sales, but the correction was anticipated to be milder than usual in recessionary periods. Thus, for 1980 as a whole they merely forecast $15 billion less inventory accumulation than in 1979.

The DRI control forecast of January 1980 showed a net inventory decumulation of some $1.4 billion over the period 1980: I, II, III as a whole with net accumulation of $3.4 billion in 1980: IV, making a net accumulation of about $2 billion for 1980 as a whole.[17] This compares, however, with a net accumulation of some $40 to $45 billion during 1979. The DRI analysts felt, however, that the cautious inventory control, in line with sales, they had observed in 1979 seemed to continue and "should help to restrict the normally volatile movements of inventories during a downswing."[18]

Some risk of scrambling to restock if 1980 recession turns to boom

The greatest inventory-movement risk the DRI forecasters found in the 1980 situation was the possibility of a sustained boom in 1980 (part of the boom-bust scenario), which would leave businesses "understocked and scrambling for additional goods and supplies."[19] The 25-percent probability weight attached to this explosive possibility is a matter of subjective

evaluation but seems greater in light of possible accelerated defense spending and international developments that would encourage hoarding.

F. *Interest rates*

Have high interest rates slowed expansion of money and the economy?

Interest rates constitute a recognized structure with a spread among different rates that has its own symptomatic value. Interest rates affect the price of corporate equities as well as outstanding bonds and, among other pervasive effects on capital costs, have an impact on housing construction and home buying and the financing of consumer durables. Any evaluation of the outlook for interest rates has to start with questions about the developments in the period following the Federal Reserve's announcement on October 6, 1979, of a restrictive monetary and interest rate policy. Various questions arise, notably:

- Has the policy been successful in slowing growth in the money stock?
- Has it effected an economic slowdown and, if so, of what dimensions?

Have interest rates peaked?

Part of the consensus-type forecast is the prognostication that interest rates have already peaked in the last quarter of 1979 or are about to do so early in 1980. This peak may be characterized in various ways with respect to the complex structure or hierarchy of interest rates. DRI sees the peak in terms of a prime rate (rate extended by commercial banks on short-term loans to their best-rated business customers) of over 15 percent and a federal funds' rate (rate charged on loans of reserve deposits funds in trading among member banks of the Federal Reserve System) of about 13.75 percent.[20]

The projected decline is predicted to be slow, with the prime rate, according to DRI estimates, falling no lower than 10.25 percent in 1981.

The complexity of the interest rate forecast and the risks of departure from the consensus-type view on amount, timing, and direction of change are substantial. Tending to increase interest rates are the political crisis affecting the Persian Gulf area, chaotic and speculative commodity and international financial markets, and the OPEC oil price effects on the persisting severe inflation. Combatting these supposedly upward-pushing forces are the various aspects of the expected recessionary economy, with

sluggish monetary demands, curtailed credit demands, and a consistent and stabilizing Federal Reserve stance. Is the result a standoff or is the balance tipped toward a lower or higher interest-rate structure?

Expert views on future interest rate trends

The DRI detail analysis on interest rates seems to conclude that the combination of factors affecting the financial markets suggests weaker bond markets (higher interest yields) in contrast with lower money market rates. The uncertainty is such that the DRI detail forecast attaches 40-percent probability to the contingency that worsening inflation and other factors may prolong high interest rates and push them to new peaks. Considerable weight is attached to the possibility of the double peak for interest rates (an earlier one for money market rates and a later one for long-term bonds) in view of the intractable inflation problem.[21]

The Heller-Perry outlook analysis for 1980 makes no explicit appraisal or forecast of the interest rate structure. It implicitly forecasts that the otherwise expected decline in interest rates would be delayed by "economic buoyancy and political tensions abroad," with the possible result of a delay and recovery of real housing activity until 1981.[22]

Citibank's *Economic Week* of December 31, 1979, expressed the opinion that in the spring or summer of 1980 the Fed will experience growing pressure to stimulate the economy as expected increases in unemployment develop and real incomes continue to decline. Its view is that sagging business activity and easing of inflation expectations by themselves should cause a marked decline in interest rates in 6 to 18 months. Specifically, it forecasts that the certificate of deposit (CD) rate will fall from about 13.5 percent as of year-end 1979 to an average of 9 to 9.5 percent by spring 1980 and 7 to 8 percent by the first half of 1981—unless the Federal Reserve resumes stimulative policies.

If the Fed should go back to a stimulative approach to "accommodate" oil price increases or to cope with recession and help recovery in the second half of 1980 (and this stimulus is larger than in the 1975-76 recovery), *Economic Week* analysts believe that interest rates in 1980 "probably would remain relatively high," due to the effect on business and inflation expectations.[23]

There are other views on the highly complex and fluid set of forces and policy decisions affecting interest rates. In an October 1979 address entitled "Interest Rates Cleared for Takeoff," Dr. Albert M. Wojnilower,

managing director, The First Boston Corporation, made this introductory comment:

> As interest rates climb higher and higher, even some of the most hardnosed bond-market bears seem tempted to reach for the honey known to be stored at the ultimate peak. Rates surely are high by any historical standard. But history can be a treacherous guide when interpreted too narrowly. The history familiar to many of us refers to a past when the dominance of the United States in world affairs was unassailable, when our domestic lifestyles were different and much less diverse, and when financial institutions and markets were far more circumscribed by convention and by law. These times are gone, perhaps never to return.

The special problem of long-term bond yields

Dr. Wojnilower concluded, among other things, that (1) much of the rise in long-term interest rates is likely to be quite permanent in character, (2) the dismal inflation outlook for the long run means higher bond yields, Treasury bond yields in excess of 10 percent is the rock-bottom forecast, and (3) it is not apt to be long "before the storm arrives." The signal for the next cyclical crest in interest rates, Dr. Wojnilower observed, is likely to come from abroad and not from Washington; foreign exchange markets and foreign economic competitors will block efforts to move to lower interest rates. Only when the major industrial powers have cooled off their inflation can the U.S. "expect a breather from rising interest rates."[24]

Still another divergent view, by commentator Henry Brandon:

> In November most people thought (following the Volcker new monetary policy of the Fed) that the dollar had bottomed, that gold had been knocked in the head by the huge rise in interest rates, and that the major recession about to start would complete the process of disinflation. It was an illusion. Credit is becoming easier, interest rates are receding, and the dollar, instead of recovering, hit a new low.

Interest rates versus money supply

Mr. Brandon concluded that the battle against inflation has been smothered by the new priorities: Iran and Afghanistan. The implication: inflation will continue; people will seek to live with it rather than bring it under control, unless financial collapse intervenes.[25] A related, unspoken implication of the Brandon analysis is that relatively easy credit at interest rates that are nominally high but still too low to restrain inflation may be one of the easy ways of living with the inflation system.

One of the aspects of the interest rate structure that directly affects great numbers of people as home buyers and home sellers is the mortgage rate.

Mortgage rates and housing

Experts in the field are reported to expect mortgage rates to fall during 1980, possibly to between 10.5 and 10.75 percent (versus current rates in the 11.5- to 12-percent range, with incipient movement toward 14 percent and up). But they also expect these "benefits" to be shortlived. Increased demand from the late 1940's "baby boom" is expected soon to be "explosive," forcing departures from the conventional 30-year mortgage at fixed rates.[26]

DRI, on the other hand, predicts that the effective conventional mortgage rate for new single-family homes will peak in excess of 12 percent by early 1980 and "remain sticky at 11.5 to 12 percent over the remainder of the year."[27]

The specter of disintermediation

Mortgage lending by the savings institutions lives under the specter of disintermediation—a process dreaded by thrift institutions by which savers withdraw funds from financial "intermediaries" and lend them more directly to various borrowers at higher interest returns than offered by the intermediaries to depositors. DRI analysts believe that the higher interest rates paid to depositors will compel persistently high mortgage rates. Limited declines may begin late in 1980 with expected recession and more accommodating monetary policy. Risks contemplated by DRI analysts relate to "deep recession" and "boom-bust" scenarios (40 percent combined probability) with double-digit inflation and possible severe disintermediation.[28]

Questions and uncertainties in the mortgage and security field

Other questions and uncertainties, related in part to the interest rate structure and its responses to the Iran-Afghanistan crisis, involve—

- The extent to which government borrowing will pressure mortgage and other long-term markets
- Whether governmental decision making is prepared to make a substantial exception from general monetary restraint for the housing industry and the home buyer
- How that exception, if made, would be implemented
- How the impact of sharply higher interest rates on the value of mortgages and securities acquired under lower interest rates (and its repercussions on net worth, capital ratios, and technical solvency of financial institutions) can be handled
- The extent of enhancement of the advantages of tax-exempt financing by state and local governments under higher interest rates due to the fact that the inflation premium component of tax-exempt interest is not run through the income tax mill.

G. *Housing*

An outstanding feature of economic projections for 1980 is a continuing decline in new housing starts, caused by the sharply higher mortgage interest rates and scarcity of mortgage funds. If questions remain, they seem to be how deep the ultimate falloff will be and how the decline in this important segment of the economy, furnishing employment and serving a basic need of millions of Americans, may be ameliorated. Measures to ameliorate may include adjustments to stem the outflow of deposit funds and to protect the reservoir of mortgage money.

The housing outlook: weak or bleak?

New housing starts in 1978 totalled about 2 million. The seasonally adjusted annual rate ranged between 1.4 and 1.9 million in various months of 1979, running at around 1.5 million toward the end of the year.[29]

The DRI control forecast of January 1980 predicted that housing starts would fall to 1.3 million by mid-1980, with recovery beginning slowly in late 1980 as financial markets stage a predicted recovery. The forecast envisaged a rise to 1.8 million units in 1981 and 2 million (the 1978 rate) in 1982. The detailed forecast discussion disclosed "bleak prospects" for the single-family housing market and financial data signaling further problems ahead. These signals included a tight and shrinking mortgage money market and losses of savings and earnings by the thrift institutions. DRI's evaluation recognized some hope in recent policy changes to strengthen the flow of funds from savers to the housing buyers, such as federal and state actions for relief from restrictions of state usury laws, new variable-rate money market certificates, and proposals by the Federal Home Loan Bank (FHLB) Board for variable-rate mortgages.

The DRI analysis points to continued strength in multifamily housing construction aided by government support and the compulsion of "unaffordable" single-family home prices and financing requirements.

The overall outlook in the DRI analysis is for weak housing activity, with considerable downside risks in the forecast due to even tighter financial conditions.[30]

The Heller-Perry outlook letter of January 21, 1980, was also pessimistic about residential construction in 1980. It predicted a fall in housing starts to 1.3 million in 1980, 25 percent below the 1979 level of about 1.75 million. This would represent a 15-percent drop in terms of GNP for "real

residential construction activity" for 1980. Heller and Perry recognize the underlying strength of the housing sector: little evidence of gluts or overbuilding, strong rates of family formation, and low vacancy rates. Recovery only requires more favorable interest rates and mortgage money, but Heller and Perry feel that this condition will be delayed by the underlying economic buoyancy and political tensions abroad possibly until 1981.

The Citibank's *Economic Week* of January 28, 1980, is somewhat more optimistic in the near term than either DRI or Heller-Perry on the housing outlook, forecasting 1.5 million units in 1980 versus their 1.3 million range. For 1981, it sees recovery to about 1.75 million starts, slightly below the 1979 level. Its analysis focuses on the regional differences in prospective housing trends in recession and recovery, due to relative growth patterns and other regional differentials. Population growth patterns favor the maintenance of high levels of both demand and housing construction in the West and the South and a growing share of the nation's total housing activity. However, housing stock dearths and vacancy rates, especially in the Northeast but to a lesser extent in the North Central states, suggest faster recovery in those areas in 1981, the North Central area nearly matching the Northeast due to its anticipated earlier recovery of purchasing power.[31]

Overall,the outlook for housing in 1980-81 seems to be one of strong underlying demand based on population growth and need. The uncertainties relate primarily to the operation of the financial structure, government credit policies overall and with respect to housing, and possible political events abroad that could perforce depress or halt normal housing growth.

Uncertainties and contingencies affecting mortgage rates and housing

A few further perspectives on housing uncertainties are in order. Housing construction expenditures were ranging around the $100-billion level (seasonally adjusted annual rate) in December 1979. Of this total, roughly 79 percent represents new housing units; and 21 percent, nonhousekeeping residential construction and additions and alterations. Important as it is, housing construction accounts for only about 42 percent of total construction in dollar terms as of December 1979. In the event housing receded as forecast for 1980, other construction—for federal, state, and local governments; for commercial, industrial, and other uses, including construction related to growing defense requirements—could absorb part or all of the "release" of construction GNP by housing declines so as to cushion the overall effect on the national economy.[32]

Other uncertainties in the 1980 situation:

- How will inflation expectations affect the inflation-corrected net real mortgage rate that home buyers perceive?
- Will the anticipated falloff in auto demand serve to irrigate the housing market?
- If the refinancing of existing homes, some of which is drained into other uses by the sellers of homes, was reduced by home price conditions and credit policies, what support would this lend to new housing?
- Will new, even more favorable, savings certificate provisions and similar financial vehicles maintain a surprising flow of money to support housing?

H. *Autos*

Like housing, automobile production and sales are one of the indicators that help give economic forecasters considerable assurance in predicting an economic decline in 1980. The auto industry and its suppliers constitute a major element in the U.S. industrial structure. In normal times a major falloff in domestic auto production and sales would almost certainly portend recession.

Is the outlook for autos weak, hopeful, or dismal?

Experts differ in their degree of pessimism about the economic outlook for the automobile sector, although much of the difference may consist of interpretive semantics rather than the actual statistical magnitude involved. Some, like Heller-Perry, seem to soft-pedal the auto industry component of the economy, as though with higher values in mind they did not care to attach blame to a shrinkage of autos in a general decline or give credit to a strong auto sector for possible strength in the economy of 1980.

First, a brief background on recent production levels for motor vehicles and parts. As of December 1979, the production index for motor vehicles and parts was 134.8 versus 182.1 a year earlier (26-percent reduction) and 169.9 for 1978 as a whole (21-percent reduction).[33] Imports of small foreign motor cars were making inroads into U.S. markets; and American auto manufacturers were apparently incapable—because of the long lead time in production planning and previous lack of foresight or limited responsiveness on the part of all concerned to imminent conservation requirements—of fully meeting the new market demands for more fuel-efficient vehicles. This is the setting for the projected further declines in automobile production.

On the pessimistic side, Lawrence Chimerdine of Chase Econometrics is reported to forecast total car sales in 1980 of 9.1 million units, down 13.3 percent from the 1979 estimate of 10.5 million and 19.5 percent from the 1978 level of 11.3 million units, the latter the highest level since 1973. Chimerdine predicts that foreign imports (equal to 22 percent of sales in 1979) will be down to 20 percent in 1980, leaving 7.3 million domestic units sold. American production of small cars is said to account for the 2-percentage-point drop but is characterized as still nowhere near enough to be of much help to domestic automakers. The auto sales downturn is expected to run into summer 1980 as the anticipated recession intensifies. "Advance" buying in late 1979 is said to have borrowed from the future market. People are said to be keeping their cars longer, waiting until the installment debt is fully paid off before "trading in," discouraged by the slump in used-car valuations from trades, and driving less.[34]

Some upbeat views

Somewhat, but qualifiedly, more optimistic, David L. Babson & Co., investment advisers, are reported to predict a two-year drop (1980-81) of 12.5 percent from the 1978 level of auto sales. They predict that the 1979-80 slowdown will turn out to be milder than in 1973-75.[35] Babson indicates auto recovery may come by 1981 but there is a "long row to hoe." Design and manufacture to meet pollution, mileage, and safety standards will require multibillion-dollar investments. Foreign competition will increase. Babson indicates that even a Chrysler failure would not make much difference to the rest of the industry; Chrysler plants would continue to produce.

Financial press reports of mid-February 1980 indicate a 22-percent decline in car sales in January, with erratic pressures and differentials in the impact on different auto manufacturers.[36]

In the face of this pessimism, General Motors Chairman Thomas A. Murphy was reported somewhat earlier to see vitality in the auto industry and to predict that auto sales will soon climb. In his view, only the gasoline shortage kept 1979 from being another record auto year, although experts belying his prediction point out that gasoline shortages will continue to be a fact.

Possible sources of strength

Certain points seem to have been left out of this analysis: (1) At some point in the gasoline price scale, the pressure to switch from old gas-guzzlers to new, more fuel-efficient models will overcome any trade-in loss, stimulating new buying. (2) Prospects for a heightened defense effort would presumably involve a substantial automotive component;

and a wide range of military-type vehicles and equipment is made by the auto industry, thus helping take up slack caused by a slump in civilian demand.

Another set of auto forecast figures by DRI reflects its view that the automobile industry continues to be weak and will experience a further decline in sales.[37] The outlook for the industry is characterized as "bleak." In brief, its control forecast indicates that total car sales will fall from their 10.8-million-unit rate in 1979: III to an average 9.4-million-unit rate over the next four quarters. DRI forecasts that domestic sales will fall to a 7.1-million-unit annual rate by mid-1980 as fuel-efficient imports "continue to be popular." This forecast seems closely comparable to the Chimerdine, Chase Econometric estimate of 7.3 million domestic unit sales for 1980 as a whole.

Pessimistic views on auto industry sales

The factors cited by DRI analysts as contributing to this "dismal sales picture" include (1) a substantial, but not entirely catastrophic, rise in gasoline prices averaging 21.2 percent over the forecast interval of four quarters, (2) a 1.3-percent drop-off in real disposable income of consumers in the next four quarters, (3) a further weakening of consumer sentiment, (4) limited room for further inflation-anticipatory spending, on account of real income erosion, tight credit, and the overextended position of consumers as a whole, and (5) unemployment.

Numerous downside risks in this forecast are cited. The most serious is said to be continued near-term strength in the economy, leading to a deeper and more severe readjustment in late 1980. Any sustained consumer buying as an inflation hedge or strength in the business sector is envisaged as triggering further monetary-credit tightening by the Federal Reserve. Sharply higher oil prices represent a contingency that would also further curb auto sales.[38]

Trucks are not included in the figures shown for the above forecasts, which are limited to passenger cars. However, the truck figures (in the 3.21 to 3.29 million range in 1980)[39] follow a generally similar pattern and do not substantially alter the auto forecast picture.

Citibank's *Economic Week* takes a pessimistic tone in examining auto sales, but the EW prediction that it is unlikely that auto sales will average more than 10 million units in 1980 seems to be actually higher than the DRI, Chimerdine, and Babson figures cited. The explanation for this

difference may be the rather special assumption and related analysis on which the EW prediction seems to rest. This assumption is that the Federal Reserve "will shift toward a more stimulative posture by mid-year, bringing about a sharp rise in real income, a speed-up in permanent income and, as a result, a recovery in auto sales."[40] EW predicts the recovery will continue, bringing auto sales to 10.8 million units in 1981.[41]

I. *The government sectors*

GNP contribution versus financial budgetary position

The government sectors of the economy are reflected in two major groups of economic data. One relates to government purchases of goods and services, a GNP component comprising roughly 20 percent of the total GNP at 1979:IV levels. These figures represent the size of government, its contribution to the GNP aggregate, and by the same token its utilization and employment of the available economic resources of the nation in providing government services. High or growing levels of this component, for example, may reflect greater pressure on the economy. Changes in the level also reflect, for example, changes in jobs and other government-related business activity. The other data source is the financial budget statistics for the level and balance of revenue and expenditures for the various levels of government. Budgetary surpluses tend to reflect a restraining, anti-inflationary, or even recessionary influence. Deficits, particularly for the federal government, tend to represent a new source of purchasing power that may serve to stimulate, or even cause inflationary pressure on, the economy.

Government purchases analysis

Illustrative government GNP or purchases data as of 1979:IV are shown below:

	Amount $billions, annual rate	Percent of GNP ($2455.8)
Federal		
Defense	$114.6	4.67%
Non-defense	62.4	2.54
Total, federal	$177.0	7.21
State and local	322.8	13.14
Total, all governments	499.8	20.35

SOURCE: Compiled and computed from data appearing in *Economic Indicators.* Prepared for the Joint Economic Committee by the Council of Economic Advisers. Washington, D.C.: Government Printing Office, January 1980. p. 1.

Federal purchases are smaller than state and local relative to corresponding budget data since a large part of the federal budget represents transfer items involving payments to citizens and other government levels that are not direct purchases of goods and services.

1. *State and local governments*

Deceleration of state and local purchases

The DRI forecast of January 1980 predicted that there will be little or no real growth in total purchases by state and local governments over the next year. In the view of its analysts, the recent surge of construction activity purchases by these governments in late 1979 is now over. Thus, its forecast reflecting level purchases in 1980 involves sharp deceleration of state and local purchases from the late 1979 levels. The projected economic recovery of 1981 is expected to bring slow and gradual real gains in purchases as state and local budget positions improve from the projected 1980 recession-related setback.

State and local operating deficits

In budgetary terms, the DRI forecast predicts—consistently with its overall recession forecast—that in spite of slowing expenditure growth, the revenue losses to state and localities will result in operating budget deficits (excluding social insurance accounts) at about a $14-billion annual rate level by late 1980 ($12.2 billion for 1980 as a whole). Public assistance rolls are also projected to swell with recession, increasing state and local transfer payments by 11.3 percent in 1980 versus 7.8 percent in 1979.

Factors in this budgetary outlook include[42] (1) expected evaporation of the 1977-78 surpluses in key states (which held most of the surpluses) where tax limitation and roll-back initiatives played major roles, (2) continued decline in federal aid, and (3) some lag in expenditure declines behind revenue decreases due to some tenacity in holding on to payrolls.

DRI analysts recognize considerable risks in this forecast. The chief one seems to be that since the projected operating deficits are stretched to their political and economic limits, any worsening of total receipts would compel offsetting reductions in expenditures.[43] DRI's risk analysis seems to give little or no heed to the possibility that there may be no recession (and its related impact on state-local budgets) and that the continuing defense outlay increases that may prevent it will also prevent the subsequent "bust" that DRI tends to include in its 25-percent probability, delayed-recession scenario.

Factors restricting state and local spending

The Heller-Perry outlook letter of January 21, 1980, limits its specific analysis of state and local operations to the purchases aspect. Its view is that state and local purchases "are being held in check by tax cuts, spending limits, and a clamp-down on increases in federal grants." For 1980 as a whole the prediction is that current dollar spending will increase by about 9 percent, roughly the same as the 1979 advance.[44] This seems roughly consistent with the control forecast by DRI, which shows current dollar purchases rising from $323.0 billion in 1979:IV to $354.4 billion in 1980:IV, subject to an inflation correction factor in the 9.5 percent range.

2. *Federal government*

The DRI control forecast of January 1980 for the fiscal year 1981 federal budget assumed tax cuts worth $25 billion effective in calendar 1981 but not in 1980. This forecast assumption is compared with the Administration's budget for fiscal year 1981 in the text table below. The Administration budget assumes no tax cuts. Both DRI and the Administration budget assume some revenues from the windfall tax on oil based on a House-Senate compromise.

	DRI forecast			Administration budget, fiscal year 1981
	Calendar year		Fiscal year 1981 approximation*	
	1980	1981		
Receipts	540.5	604.0	588.0	600.0
Outlays	573.6	640.7	624.0	615.8
Deficit (–)	–33.1	–36.7	–36.0	–15.8

*Derived by author.

Allowing for the $25 billion annual tax cuts in the DRI forecast assumption effective in calendar year 1981 (and 9 months of fiscal year 1981), the two estimates are closely similar. Both are based upon similar projections of a mild recession in 1980 followed by recovery into 1981. The DRI control and Administration budget projections of GNP are compared as follows:

	Calendar years ($billions)	
	1980	1981
DRI	$2,559	$2,869
Administration budget	2,567	2,842

The DRI control forecast for GNP is $8 billion below the Administration budget figure for 1980. It is $27 billion higher than the Administration budget projection for GNP for 1981, presumably reflecting, at least in part, the stimulative effect of the $25-billion tax cut included in the DRI assumptions for 1981 but not included in the Administration budget calculations.

Federal budget to swing toward restraint

The Heller-Perry outlook letter of January 21, 1980, foresees the federal budget position as continuing to swing sharply toward restraint in 1980-81. It sees income tax liabilities rising at a rate of $12 billion a year and Social Security payroll tax increases of $31 billion going into effect in the 1979-81 period. It indicates concern that this revenue-side strengthening of the fiscal position, barring more spending, will cause the federal high employment surplus to rise over $20 billion a year. This fiscal drag element would continue under the Administration budget for fiscal year 1981 which, as Heller-Perry closely forecast, estimates spending at $616 billion and revenue, without tax cuts, of some $600 billion.

The concern of the Heller-Perry analysis over the projected fiscal stance, which they characterize as "tighter and tougher than in most election years" is qualified by their view that the rise in defense spending, election-year slippage, plus the recessionary decline in GNP will increase total federal spending in 1980-81 as a percentage of GNP. They observe that a possible major military speed-up would bolster the economy not only via the fiscal 1981 budget but also by its motivating impact on business to build plant and equipment for anticipated defense spending in the future.

Not yet time for tax cuts

The Heller-Perry analysis broadly agrees with the Administration's position that the time has not yet come for tax cuts. Heller-Perry take this position in view of inflation, delay in the actual appearance of the projected recession, and defense requirements and anxieties generated by the Middle East and Russian "intransigence." They view their position as one of "keeping our powder dry" and being "ready to fire tax-cut shots at the twin targets of recession and inflation as soon as the time is ripe." The Administration's position, however, supports certain tax increases, included in the budget estimates, beyond the windfall tax on oil. These include administrative procedures for speedier collection of existing individual and corporate income taxes, increased aviation fuel tax, and other items (some proposed in the past or under legislative consideration), which observers do not rate likely to go into effect. These items apparently total some $7 billion in fiscal 1981 and the projected revenues of $600

billion would be $593 billion and the deficit of $15 billion would be $22 billion, in their absence.[45]

The Administration's refusal to propose tax cuts in the 1981 budget is more positive than the Heller-Perry "keeping powder-dry" approach and is apparently based on the grim picture of the economy presented in the President's Economic Report and the Annual Report of the Council of Economic Advisers. This shows an economy headed for recession with dangers of worsening inflation. The President specifically regarded a tax cut irresponsible under these conditions. In his words: "To have recommended a tax reduction and a much larger budget deficit would have been a signal that we weren't serious in our fight against inflation . . . . It would have increased inflationary expectations, weakened the value of the dollar in exchange markets, and risked the translation of last year's oil-led inflation into a new and higher wage-price spiral in 1980."

The Economic Report analysis seems to take the newer view of the inflation problem, which sees an "underlying" inflation rate component of some 8 to 9 percent (higher by 2 to 3 percentage points than in 1976). This underlying inflation rate reflects the inflationary bias in the economy, including the inertial momentum of the wage-price spiral. Other components include the demand, shock effect, and cost-push elements in more volatile sectors, such as energy, housing, and food. The new view of inflation and its components, which has numerous variants, see inflation as a deeply embedded and still somewhat mysterious feature of the free enterprise economy to be eradicated only with years of effort on a variety of policy fronts.

The discussion in the Economic Report and Annual Report of the Council of Economic Advisers, which helps support the no-tax-cut position, refers throughout to the difficulties of economic forecasting in the present situation. As Council Chairman Schultze is reported as saying: "The performance of the economy has made the economic outlook for 1980 and 1981 particularly difficult to fathom."[46]

Uncertainties and ambiguities in tax policy decisions for 1980-81

The uncertainties and ambiguities inherent in the tax policy decisions for 1980-81 include the growing doubts whether recessions (or austere budgetary policy to create slack in the economy) now really help to cure inflation. If the major component is a resistant underlying rate of 7, 8, or even 9 percent, and much of the remainder is shock or cost-push inflation due to energy prices, little demand or business cycle inflation is left to manage readily by fiscal programs.[47]

3. *Outlook for education programs*

a. *General observations*

Leveling off of grants-in-aid will lead to keen competition for funding among social programs

Budgets for the early 1980's will be increasingly security-minded. In spite of determined initiatives in education and youth training, the budgetary growth emphasis will be elsewhere. With a clearly expanding defense effort, possibly including national registration or the draft, grants-in-aid programs for social purposes, including education, will not shrink much in real terms but will level off. The 14- to 15-percent average annual rate of growth of recent years will not continue. Financial funding for important social purposes will inevitably be slimmer as the period of expansion ends. The result is bound to be keen competition among social programs for health, education, environmental protection, and other areas.

General budgetary arena involved

Nor is defense the sole source of pressure on education and other social programs. The financing of Social Security will come up for review and, possibly, repeated reviews in the early 1980's. With rollbacks of existing payroll taxes already under consideration and searches under way for stopgap measures, such as interfund transfers, and ways to curtail benefits in some areas, financial pressure may compel consideration of financing Social Security out of general revenues. Under these circumstances, there would be keener competition and pressures for displacement in the general budgetary arena.

Fiscal pressure on federal government

The federal government is under fiscal pressure, if not in fiscal trouble; and its mode of coping with the task of allocating limited means among competing needs and goals is complicated by the paradox of stagflation, a persisting but uneven margin of unemployment or underemployment of various kinds of human and other resources combined with a partially mysterious and virulent inflation, persisting at underlying rates that were considered a grave sign of instability by the standards of a decade or two ago.

Fiscal stringencies and cost inflation pressures on state and local governments

While the federal government is engaged in this laocoon struggle, the states will be subject to fiscal stringencies—tax limits as well as spending limitations—that make the tapering down of federal aid a negative factor of greater significance. Inflationary rises in costs for fuel, transportation, and other operating necessities will continue to hamper efforts to adjust salaries in line with increases in the cost of living. Some estimates indicate that cost-of-living adjustments (COLA) to money compensation for state and local employees generally have fallen 12 to 15 percent behind the cost

of living over the past decade or so, with corresponding downward adjustments in real wages. This trend will probably continue well into the 1980's. There is reason to suspect that the public expects these reductions. While it is not possible to reduce teaching staffs beyond a certain point without causing unacceptable teacher-pupil ratios, pay may be lowered by inflation without commensurate inflation correction.

Special education costs

Increasing emphasis in judicial decisions and policy commitments on more provision for education for the disadvantaged or handicapped child may be very expensive, adding to financial pressures already inherent in the situation. Whatever relief may develop from demographic trends lowering the school population, at least in slow-growing or static population areas, is not readily measurable. Indeed, demographic trends may serve to justify or support an increasingly tight-fisted budgetary attitude toward education at the state-local level.

b. *Federal budget specifics*

Highlights of federal budget 1981 proposals for grants-in-aid generally and for education programs and initiatives

All federal grant-in-aid outlays to state and local governments are estimated at $96.3 billion for 1981, $7.4 billion above the estimated 1980 total of $88.9 billion, and $13.5 billion higher than the 1979 level of $82.9 billion. In the two decades from 1958 to 1978, grants grew at an average annual rate of 14.6 percent. The slower growth in grants-in-aid planned from 1978 to 1981 of 7.3 percent annually is the result of two factors, as outlined in the pertinent special analysis section of the 1981 budget documentation:

1. A phasedown of outlays associated with economic stimulus grants enacted in response to the last recession
2. The need for overall budgetary restraint as part of a major effort to hold down inflation.[48]

This statement in the face of projected recession in 1980, virtually the first ever forecast by a President for his term of office, let alone in an election year, emphasizes the strange conflict of objectives that undermines the clear logic of public policy under stagflation.

Legislation creating the new Department of Education was proposed by the Administration in recognition of the growing size and complexity of federal support for education. The 1981 budget shows increases in requested budget authority for education from $15.3 billion in 1980 to $16.5 billion in 1981—approximately a 7.8-percent rise. In terms of actual

outlays the estimated increase is from $14.2 billion in 1980 to $14.4 billion in 1981, or about 1.25 percent during a period in which the annual inflation rate is expected to be some 10 to 11 percent or higher.

The projected education outlays include what is characterized as a major youth education and training initiative. The education component of this initiative in 1981 would involve $900 million in grants for supplementary education in basic academic and employment skills for school districts with a high concentration of disadvantagd junior and senior high school students. Local schools are expected to cooperate closely with private industry and local agencies that are administering the complementary training and employment program to help students acquire the "basic skills and work experience needed for full participation in the work force."[49]

Some $7.8 billion of estimated outlays in 1981 are for *elementary, secondary,* and *vocational* education. Most of this total is to provide formula and discretionary grants to assist state and local education agencies. Budget authority in the amount of $4.1 billion is requested for supplementary education services for low-income and low-achieving students in 1981.

Budget authority increases are proposed in the 1981 budget for Indian education, education of the handicapped, bilingual and adult education, and Head Start programs. Funding for occupational and vocational education programs is requested to be continued at 1980 levels. There is to be a $286-million reduction in the impact aid program, but the Administration is to direct the program to those school districts most adversely affected by federal activities.

The budget request for *higher education* in 1981 includes $5.6 billion in budget authority and $5.2 billion in planned outlays for student assistance and continuing education programs. The higher education total embraces some $2.4 billion in 1981 for the basic educational opportunity grant program to provide students with grants of up to $1,900. A group of other programs, comprising supplemental educational opportunity grants, state student incentive grants, and college work-study programs, would be funded at the same level as in 1980.

Other features of the 1981 budget proposals in the educational field include the following:

- A reauthorization proposal to restructure the federal student assistance loan program, which would replace the present direct and guaranteed student loan programs with a new program designed to "target federal assistance more directly to students most in need," an item involving $1.6 billion for loan aid to 2.6 million students
- Assistance to higher education institutions to help disadvantaged students in their postsecondary education, an item involving $430 million for about 850 additional fellowships for graduate professional studies and increased funding for placement, counseling, and other services for disadvantaged college students
- An increase in assistance to "developing" institutions (as part of the higher education program) in the amount of $30 million
- Some $1.4 billion in estimated 1981 outlays for the support of *education research* and development, as well as training, cultural activities, and other general education aids.

The budget analysis also points out that in addition to the funding or expenditure side of the budget summarized above, there is a "tax expenditure" item for the education function, for such tax benefits as the deductibility of many educational expenses and the exclusion from taxable income of scholarship and fellowship stipends. The tax expenditure figure, representing money awarded via tax savings for education—sometimes termed the "back door" spending route to the budget—is estimated at $2.7 billion in 1981.

Longer-range projections of total budgetary authority and outlays for education over the period through fiscal year 1983 are summarized as follows:

	Fiscal years – $billions				
	1979 actual	1980 estimate	1981 estimate	1982 estimate	1983 estimate
Budget authority	$14.3	$15.3	$16.5	$17.6	$19.0
Outlays	12.4	14.2	14.4	16.3	17.7

Source: Compiled from data appearing in *The Budget of the United States Government, Fiscal Year 1981*, pp. 220-22.

Note: These data do not include a number of federal programs that are related to education, although their primary purpose is to meet other national needs and to serve other major missions, such as veterans' education, biomedical education, the Comprehensive Employment and Training Act (CETA) training activities, and others. For full detail, see the table on "Federal Outlays for Education and Related Purposes" at page 230 of the *Budget* document source cited above and related discussion of training, employment, and other labor services at pp. 229-38.

J. *Employment, unemployment, and productivity*

Seasonally adjusted employment fell by 108,000 in January 1980, while unemployment rose by 338,000. As of January 1980 the total civilian labor force was about 104,229,000 persons, of whom 97,804,000 or 93.8 percent were employed. This leaves an unemployment rate of about 6.2 percent, representing an increase of 0.4 percentage point from the 5.8-percent rate prevailing in November 1979 and an increase of 0.3 percentage point over the December 1979 level of 5.9 percent. The January 1980 increase reflects layoffs in the auto industry. The labor participation rate (total labor force as a percent of the noninstitutional population 16 years of age and over) was about 64.4 percent in January 1980, the result of a gradual updrift in this figure from 61.8 percent in 1974.

With only a slightly increasing (essentially stable) unemployment rate persisting right into what most observers have contended are the foothills of recession, what are the other ill omens, if any, in the vital area of employment—which, after all, is a major goal of a healthy economy?

Stubborn persistence of low unemployment rate may not continue

Citibank's *Economic Week* of December 17, 1979, sees portents in the labor market and its recent trends that indicate that the tenaciously low unemployment rate may be misleading.[50] It contends that the relatively low unemployment rate merely reflects a change in the balance between the labor force and employment due to basic economic demographic trends, reversing a previous 4-year period in which there was a record increase in total employment but only a moderate and gradual reduction in the unemployment rate for a labor force undergoing an unusually rapid rate of growth. *Economic Week* analysts believe that the stability of the unemployment rate will not continue into 1980. They find signs of weakness in recent declines in the average workweek in manufacturing, increases in the layoff rate, decreases in the hiring rate, and increases in initial unemployment insurance claims. Their conclusion is that employment and unemployment will follow the projected recessionary trend in production. Their specific forecast: An unemployment rate of 8 percent or higher by summer 1980.

The DRI forecast of January 1980 recognized the "stubborn strength that has characterized labor markets all year." Nevertheless, DRI analysts indicated some "employment correction" can be expected as the recession deepens. Their specific forecast: an unemployment rate peaking at 7.9 percent in 1981:II. They observed, however, that there would be a cushioning effect on the impact of recession due to support of the labor

market by the "strong service sector, and energy-induced adjustments to the capital labor mix." The DRI analysis included the possibility that business has been simply postponing layoffs until the recession evidence is clear, a factor that would be reversed as the expected recession deepens.[51]

The Heller-Perry outlook letter of January 21, 1980, made no specific quantitative forecast on the expected level of unemployment but expected that gains in employment will end as unemployment rises throughout 1980.[52] This forecast tended to be sustained by the January 1980 figures.

Most commentators note the somewhat puzzling decline in labor productivity. Some of it is attributed to labor compositional changes; some, to the recognized phenomenon of cyclical weakness of productivity in periods of recession and weak growth. The current situation is sometimes described as including a "dismal unit-labor-cost trend," which will contribute to inflation in the double-digit range well into 1980.[53] Reports as recent as January 29, 1980, show that productivity in private business fell at a 1.6-percent annual rate in the final quarter of 1979 (the fourth quarter in a row that showed a decline).[54]

Puzzling decline in productivity

The employment and unemployment picture seems less bleak than the productivity performance and trend. Both aspects contain little understood forces that justify the adjective "puzzling." The recession assumption underlying the employment and productivity forecasts of mid- or late-January became increasingly uncertain as the economic scenario unfolded, particularly in the light of the hard-to-estimate rise in defense spending.

K. *Industrial production and capacity utilization*

Industrial production and capacity utilization data are more specialized than GNP figures and are especially significant for those who wish to observe the tangible output of the economy in its basic physical production sectors. Industrial production is measured in physical terms (tons of coal, numbers of automobiles and trucks, kilowatts of electricity, etc.) so that changes in the level or direction and magnitude of change of this important set of indicators represent real figures that, unlike monetary data, do not call for the application of deflators or index numbers to correct for inflation. Industrial production data are, however, reduced to index numbers to permit broad coverage of areas with different types of physical output units.

The degree of capacity utilization in the manufacturing sector—difficult as it is to measure—reflects the extent to which production may be sagging below normal levels with the usual result of softening of prices due to unused supply or the extent to which output is pressing above maximum efficiency levels or toward the virtual limits of physical capacity, with the usual result of upward pressure on prices due to rising costs and rigorous constraints on supply.

Industrial production rose by 0.3 percent in December 1979 following a decline of 0.3 percent in November. This level of performance was maintained in spite of cutbacks in autos, trucks, and related products.[55]

Stagnant or neutral production and capacity utilization in 1978-79 to be changed by predicted recessionary trend

The overall total industrial production index (1967=100) stood at 152.2 in December 1979 (prelim) as against 151.8 a year before and 146.1 for the year 1978 as a whole.

Manufacturing capacity utilization (Federal Reserve Series) was at 84.4 percent as of December 1979 versus 86.8 percent a year previously and 84.4 percent for 1978 as a whole. These data represent rather "neutral" or stagnant conditions in the manufacturing sector with static output levels and a slight tendency for the capacity utilization ratio to sag.

Defense buildup may alter predicted slowdown

The DRI forecast of January 1980 predicted that industrial production would fall at a 4.1 percent annual rate over most of 1980 with positive growth beginning to appear in 1980:IV. The greatest cutbacks were forecast in primary metals production, especially in motor vehicles, iron and steel, and furniture and lumber. Production was then predicted to perk up to a near 4-percent annual growth rate in 1981 and over 7 percent in the year thereafter. The DRI detailed analysis indicated that "signs of an impending slowdown are evident in recent data on industrial production capacity utilization, and inventory accumulation."[56] The expected recession conditions would reduce automobile and metal production but increase machinery and aircraft output. The risk analysis seemed to be chiefly concerned with possibilities of deeper recession than the control forecast. More recent developments indicating a defense buildup may alter this picture.

L. *Defense spending*

All budget plans contain an element of documentary formality that belies their actually uncertain and contingent nature. They are subject to politi-

cal, financial, and economic opposition and flexing. This is particularly true of the defense spending item in the 1981 budget. As drawn, it provides defense outlays of $146.2 billion for fiscal year 1981 to meet concerns over Soviet aggression and unrest in the Middle East. This figure by itself represents a 12-percent increase in current dollars over the fiscal year 1980 total of $130.4 billion, or an estimated growth of over 3 percent after adjustment for inflation. The plan is subject also to a presidential pledge that if inflation is higher than expected, the dollar figure would rise to protect the real growth target. The budget also calls for budget authority of $161.8 billion for national defense in 1981, representing an increase of some 5 percent over 1980 in estimated real terms. Further increases are scheduled at a 12 to 13 percent annual rate in terms of current dollars for 1982 and 1983.[57]

Budget proposals for defense spending 1980-81

It is only realistic to expect that these targets will be gradually increased, even in 1980, unless some near-miracle of pacification and detente-salvaging occurs. The range of areas of defense spending involved—rapid deployment, ship program, tanks, missiles, submarines, fighter planes, and research and development—suggests the possibilities of expansion beyond the moderate budget document target. Moreover, even in the absence of further, more ominous developments in the Middle East, Congressional advocates of a still stronger defense posture are reportedly pressing for higher levels of defense spending.[58] The implications for the previous consensus outlook are quite clear as to direction but impossible to quantify.

Possible increases above budget proposal levels

FOOTNOTES

[1]Data Resources, Inc. *The Data Resources Review of the U.S. Economy* (Lexington, Mass.), January 1980. p. 1.5.

[2]Heller, Walter W., and Perry, George, L. "The U.S. Economic Outlook for 1980." Minneapolis, Minn.: National City Bank of Minneapolis, January 21, 1980.

[3]Heller, Walter W. "A 'Yes But' Economy in 1980." *Wall Street Journal*, January 23, 1980.

[4]*Ibid.*

[5]"What the Downturn Means for Prices." *Economic Week*. New York: Citibank, December 31, 1979.

[6]See, for example, Visco, Ignazio. "The Measurement and Analysis of Inflation Expectations: The Case of Italy." *Economic Papers*. Rome: Bank of Italy Research Department, June 1979. pp. 149-242.

[7]*Gross*, as used in this connection, means calculated prior to "netting out," with deductions for capital recovery allowances, such as depreciation and depletion.

[8]Some disinvestment in inventories, but not as heavy as might be associated with a recession movement.

[9]Eckstein, Otto. "What If There Is No Recession?" *The Data Resources Review of the U.S. Economy* (Lexington, Mass.), January 1980. pp. 1.9.-1.11.

[10]Data Resources, Inc., *Op. cit.*, pp. 1.5, 1.7-1.8.

[11]Heller, Walter W., and Perry, George L., *Op. cit.*

[12]*Ibid.*

[13]Data Resources, Inc., *Op. cit.*, p. 1.5.

[14]Slater, Courtenay, as quoted in the *Wall Street Journal*, January 25, 1980.

[15]Council of Economic Advisers. *Economic Indicators*. Prepared for the Joint Economic Committee. Washington, D.C.: Government Printing Office, January 1980. p. 20.

[16]Heller, Walter W., and Perry, George L., *Op. cit.*

[17]Data Resources, Inc., *Op. cit.*, p. 1.7.

[18]*Ibid.*, p. 1.64.

[19]*Ibid.*, p. 1.66.

[20]*Ibid.*, p. 1.5

[21]Sinai, Allen. "Financial: Money, Credit, and Interest Rates." *The Data Resources Review of the U.S. Economy* (Lexington, Mass.), January 1980. pp. 1.115-1.124.

[22]Heller, Walter W., and Perry, George L., *Op. cit.*

[23]"Can the Fed Hold the Line?" *Economic Week*. New York: Citibank, December 31, 1979.

[24]Wojnilower, Albert M. "Interest Rates Cleared for Takeoff." Address given at the convention of the Public Securities Association, Colorado Springs, Colorado, October 9, 1979.

[25]Brandon, Henry. "Inflation and Recession." *Washington Star*, January 24, 1980. p. A13.

[26]Gallagher, Ronald P. "Mortgage Rate Drop Seen with Rise in Demand." *Washington Post*, January 10, 1980.

[27]Gerson, Roberta, and Sinai, Allen. "Mortgage Sector." *The Data Resources Review of the U.S. Economy* (Lexington, Mass.), January 1980. p. 1.134.

[28]*Ibid.*, pp. 1.128-1.135.

[29]Council of Economic Advisers, *Op. cit.*, p. 19.

[30]Gough, Robert, and Stoddard, Anne. "Housing." *The Data Resources Review of the U.S. Economy* (Lexington, Mass.), January 1980. pp. 1.48-1.52.

[31]"Housing—What the Recession Will Mean for the Regions." *Economic Week*. New York: Citibank, January 28, 1980.

[32]Figures derived or computed from data appearing in *Economic Indicators*, p. 19. (See Footnote 15.)

[33]Figures taken or calculated from Federal Reserve data on industrial production indexes appearing in *Economic Indicators*, p. 18. (See Footnote 15.)

[34]As reported in "Auto Sales Are Heading for a Skid." Industry Update Section. *Nation's Business*, January 1980. p. 30A.

[35]*Ibid.*

[36]*Wall Street Journal*, February 14, 1980. pp. 1, 3.

[37]Data Resources, Inc., *Op. cit.*, pp. 1.5, 1.45.

[38]Kearns, Lucinda. "Automobiles." *The Data Resources Review of the U.S. Economy* (Lexington, Mass.), January 1980. pp. 1.44-1.47.

[39]Truck deliveries are forecast at 3.25 million units for 1981:III, versus 3.39 million units in 1979:III. Of the 3.25 million forecast total, 0.34 are classified as heavy and medium, while 2.91 million are classified as light trucks.

[40]Economics Department. *Economic Week*. New York: Citibank, January 17, 1980.

[41]The EW analysis involves concepts of current income, permanent income, and "transitory" income—the difference between current-period and permanent income. It is this transitory income that is said to put a cyclical bounce in sales of items like autos.

[42]Local officials are reported to applaud President Carter's proposal to "level fund" federal revenue sharing for the next five years. But they point out that double-digit inflation is eroding the real benefit of level federal funds without inflation correction, thus making local tax increases more likely.

See Callahan, Patrick J. "Inflation and Revenue Sharing." *Amherst Morning Record* (Amherst, Mass.), January 30, 1980

[43]Discussion derived from Brooks, Stephen. "State and Local Governments." *The Data Resources Review of the U.S. Economy* (Lexington, Mass.), January 1980. pp. 1.68-1.71.

[44]Heller, Walter W., and Perry, George L., *Op. cit.*

[45]*Wall Street Journal*, January 29, 1980. p. 4.

[46]Schultze, Charles, as quoted in the *Wall Street Journal*, January 31, 1980. p. 3.

[47]See "Why Recessions Don't Cure Inflation." *Dun's Review*, January 1980. pp. 56-57, 61-62.

[48]Special Analysis H. "Federal Aid to State and Local Governments. " *Special Analyses, Budget of the United States Government, Fiscal Year 1981.* Washington, D.C.: Government Printing Office, 1980. p. 239.

[49]Budget Message of the President. "Education." *The United States Budget in Brief, Fiscal Year 1981.* Washington, D.C.: Government Printing Office, January 28, 1980. p. 43.

[50]"Why Employment Must Head Down." *Economic Week*. New York: Citibank, December 17, 1979.

[51]Siegel, Robin, "Employment, Unemployment, and Labor Force." *The Data Resources Review of the U.S. Economy* (Lexington, Mass.), January 1980. pp. 1.101-1.106.

[52]Heller, Walter W., and Perry, George L., *Op. cit.*

[53]Siegel, Robin, *Op. cit.*, pp. 1.94-1.99.

[54]*Wall Street Journal*, January 29, 1980. pp. 1, 2.

[55]Council of Economic Advisers. *Economic Indicators.* Prepared for the Joint Economic Committee. Washington, D.C.: Government Printing Office, December 1979. p. 17.

[56]Data Resources, Inc., *Op. cit.* Highlights, p. 1.5; and Phillips, Lee, "Industrial Production," detailed analysis, p. 1.107.

[57]Budget Message of the President. *The United States Budget in Brief, Fiscal Year 1981.* Washington, D.C.: Government Printing Office, January 28, 1980. pp. 4, 25; and *The Budget of the United States Government, Fiscal Year 1981.* Washington, D.C.: Government Printing Office, 1980. p. 100.

Figures cited here on national defense include U.S. Department of Defense—military, atomic energy defense activities, and other defense-related activities.

[58]Levine, Richard J., and Bacon, Kenneth H. *Wall Street Journal*, January 29, 1980. pp. 1, 3, 6; and Wilson, George C., *Washington Post*, February 1, 1980.

VI. Concluding Comments

The 1980 economic scene, already beginning to unfold, presents a severe test of both the economic forecasting art and wise policymaking.

Reevaluation of contributions and limitations of macroeconometric forecasting models

It is easy to criticize and deprecate the macroeconomic model in the light of recent underestimates of inflation and the mysterious delay of the 1980 recession. But the continuing quantitative modeling of the economy has already demonstrated great capabilities and serves important purposes. It is essential to approach the tasks of economic policy with a structured data bank and predictive apparatus based on the best behavioral rules and interrelationships that theory and experience can provide. It is also probably important to leaven the mechanics with occasionally inspired intuition plus common sense.

On another point, it seems quite premature to pronounce, as some have done, the bankruptcy of Keynesian econometric models on grounds that they "cannot deal with current economic ills because they concentate on questions of demand," neglecting the supply side and factors stimulating productivity.[1] The macroeconometric models are adaptable to whatever emphasis is appropriate on supply-side variables. The main stumbling block for such models is probably not supply-side omissions or even naive Keynesian bias per se, but general dependence upon a limited repertoire of behavioral rules and upon past statistical relationships and standard available statistical magnitudes in a world of abrupt obsolescence of old coefficients and measurements.

A 1980 recession would be the product of unforeseen events that alter its essential character

If and when something resembling the most-advertised recession in history materializes, the recent world developments that have helped make it should be recognized as altering its essential character. It will not be the same recession forecasters foresaw and, in some cases, announced as arriving long before the end of 1979. If it is fair to say "all bets are off" when external events upset forecast assumptions and clearly frustrate the forecast result, it is also fair to apply the same disclaimer to the arrival of unanticipated economic disturbances and dislocations that mimic recession.

Uncertainties about effective remedies and a social consensus to deal with deeply embedded inflation

The worst uncertainties in the approach to 1980 are perhaps not so much the forecast, but how to deal with it and its variant scenarios. If inflation is the Number One enemy, can it be dealt with by inviting recession, if a large inflation component is impervious to conventional restraining strategy? If it takes years to eradicate a deeply embedded inflationary bias, just how does economic policy go about this task? Is the free enterprise system forever constrained to buy a measure of price stability only at the price of giving up its ability to marshall all its resources in the great world competition with the authoritarian bloc? Can an effective social consensus be reached on measures to deal with inflation?

This paper was initiated in December 1979. Its theme at that time—the unusual uncertainty in the 1980 outlook—had become almost threadbare by early February 1980. Gleanings from the press in the first week of February continued to support the original theme of mixed signals, crosscurrents, a kaleidoscopic assumption framework, and basic uncertainties in an outlook on which there has been token agreement on a strangely hollow consensus: mild/brief to moderate recession.

Original theme of mixed signals, crosscurrents confirmed by developments through late February 1980

The January 1980 jump in the unemployment rate to 6.2 percent was accompanied by authoritative cautions that it would be premature to regard it as confirming a major downturn or as reflecting general unemployment since auto layoffs were a large factor in the development. Yet General Motors was planning a record multibillion-dollar assembly plant modernization, looking beyond the current auto slump. Spot market oil prices were reported taking a downturn, suggesting the likelihood of a slowdown in worldwide price increases. Federal Reserve Chairman Volcker stated before the Joint Economic Committee that the nation might avoid a recession in 1980 because of Middle East crisis developments. Before the same Committee, Treasury Secretary Miller, reflecting on uncertainties in the recent Administration forecast, testified that "the probabilities are that the (economy) might not be as soft as expected." Retail sales were reported to have rebounded sharply in January 1980, defying predictions that they could continue their pace at the expense of savings.[2] But this was qualified by some who contended that it was a technical result of applying standard seasonal adjustments to a smaller-than-usual decline of sales due to relatively mild January weather. By mid-February 1980 a number of economists were reported to be revising their forecasts, lifting their previously gloomy 1980 predictions. Others clung to a 1980 recession outlook but postponed its onset a quarter or increased their estimate of the chances of a no-recession scenario.[3] The

temporary strength of the stock market, a dubious, but revered leading indicator, raised obvious questions. Was it rejecting the recession thesis? Was it governed by the enticements of energy and defense stocks? Was it merely being spurred by a new perception of corporate equities as one of the few remaining underpriced inflation hedges? Or was the market lifting its eyes beyond the 1980 recession to the hills of recovery in 1981?

A new chapter: An economy out of control? Recession the alternative to disaster?

These questions were soon displaced by new developments that promised to open a fresh chapter in the 1980 economic saga. After sweeping by the 900 level of the Dow Jones industrial average, the stock market suffered premonitory tremors on February 14, 1980, which made it seem almost as though, tired and susceptible after a lengthy climb, it had received an inkling of the disturbing news that came the next day. On February 15 the Federal Reserve raised its discount rate from 12 percent to a record 13 percent. This was in response to a jump in the producer price index by 1.6 percent in January 1980 (equivalent to a 19.2-percent annual rate, which reports indicated would be 28.8 percent if food items were excluded) and growing intelligence that key monetary aggregate data were signaling growing inflationary pressure as indicated by Federal Reserve Board Governor Henry C. Wallich. Stocks dropped back below the 900 Dow Jones industrial level. Bond prices also declined and yields rose, the first of a probably dramatic sequence of interest rate adjustments to the new Fed action. The higher producer-goods prices were the probable forerunner of an expanding wave of final-goods prices as they percolated with progressive, pyramiding mark-up effects through the price structure. Administration spokespersons said little, but indicated this was consistent with previous Federal Reserve policy. The general reaction was that this whole development increased the likelihood of the 1980 recession, with general slowdowns and increased unemployment. Otto Eckstein, head of Data Resources, Inc., predicted higher interest rates and said that business should be more conservative about hiring and production, apparently echoing comments of other economists. "It brings the recession back into the picture," he was quoted as saying. Without this action, he indicated, the country "seemed to be headed for another disaster."[4] Eckstein's term *disaster* apparently referred to persistent and worsening inflation and presumably to some kind of "bust" finale to the scenario.

FOOTNOTES

[1]See Evans, Michael K. "The Bankruptcy of Keynesian Econometric Models." *Challenge*, January-February 1980. pp. 13-19.

[2]*Washington Post*, January 12, 1980.

[3]*Washington Star*, February 11, 1980. p. B5.

[4]*Washington Star*, February 16, 1980. p. A6.

Appendix A.

METHODOLOGY AND PROBLEMS OF MACROECONOMETRIC FORECASTING

This appendix provides nontechnical background on the methods and contributions of macroeconometric forecasting and its problems and difficulties in watershed situations like the present one.

A. *Methodology*

By it nature, econometrics, and in particular macroeconometric modeling, seeks to identify and measure economic relationship by statistical and mathematical techniques, primarily for the purpose of forecasting future economic developments and laying a factual groundwork for choosing among policy alternatives.[1]

While econometrics has evolved against a long historical background of statistical-mathematical economics (the term itself was introduced in 1926 by Ragnar Frisch), its rapid expansion and extension into the field of economic forecasting models was the concomitant of both neo-Keynesian national income analysis and the post-World War II development of sophisticated, high-speed electronic computers. The computer technique facilitated (1) the assemblage, retrieval, manipulation, and analysis of economic data (increasingly, on a quarterly, or even shorter, time-interval basis) and (2) the formulation of systems of simultaneous equations expressing interrelationships among selected key economic variables, using multivariate regression procedures. One of the major contributions of the computerized simultaneous model systems is their ability to reflect the interplay and interaction of different component equations that would otherwise defy ordinary calculation or intuition. The marvelous efficiency of the computerized model permits the rapid exploration of the implications of a range of alternative forecast assumptions or public policy options.

B. *Dependence on persistence of past relationships*

As this somewhat formidable preliminary comment suggests, the macroeconomic models simulating the economic system are constructed on the basis of past relationships developed from what are considered appropriate historic experience-data. The reliability of forecasts projected by these models, therefore, depends upon the persistence in substantially unchanged form of past interrelationships. Any sharp change or deviation from the past—other than, say, a gradual evolutionary development for which corrections can be made—will affect the predictive capacity of the model and possibly throw it into a tailspin.

The most difficult task of macroeconometric models is identifying and predicting in quantitative terms the outcome of economic turning points—in the present juncture the presumed termination of a protracted recovery-prosperity period. The models perform best in predicting the sequence of developments in well identified, early recovery phases of the economic cycle—quite different from the present constellation of events.

The formulation of models is itself guided by the prevailing accepted repertoire of economic relationships, mechanisms, and forces. In periods of departure from past relationships, with the appearance and only grudging acceptance of new tendencies, motivations, and behavior patterns of business and consumers, the old models call for overhaul or substantial new drawing board treatment. This problem is shared by both the economic theorist and the economic model formulator.

The failure of economists and economic models to understand and take account of the pervasive inflationary bias of the system in recent years has been publicly noted by at least one high public official. In her recent "introspective farewell" to her position as Secretary of Commerce, professional economist Juanita M. Kreps expressed doubts about economic dogma and forecasting preoccupations and techniques, saying, among other things: "I've been teaching since I was 20; and to tell you the truth, I don't know what I would teach now . . . You do lose faith in the catechism after a while."[2]

C. *Updating and fine tuning*

The builders and managers of the great macroeconometric models, such as Data Resources, Wharton School, and Chase Econometrics, are con-

stantly at work revising, rebuilding, updating, and fine tuning their equations. How well these efforts will keep abreast of the rapidly changing economic forces, inflation, inflation-control measures, and crisis-scale events in the fuel and energy field is itself a major source of uncertainty in evaluating economic outlook forecasts.

D. *Underlying assumptions*

Any macroeconometric model forecast depends upon its assumptions as to the future course of key independent variables on which the predictive relationships operate to project the behavior of the dependent variables of the system. Key assumptions relate, for example, to the budgetary posture, major legislative developments, monetary and fiscal policies, energy supplies and prices, productivity and unit labor costs, the exchange value of the dollar, and the condition of world economies. All these are fraught with obvious uncertainties, particularly in the 1980 situation. Alternative assumptions may be made in recognition of these uncertainties, and alternative forecast scenarios may be spun out by the computerized system to satisfy the needs of those who prefer their own particular assumptions or who want to see the reasonable range of possible scenarios. Probability weights, essentially subjective in character, may be given the alternative assumptions and related scenarios. Like percentage chance weather forecasts, these furnish the customer with some impression both of what will probably occur and of a spectrum of other moderate or extreme possibilities in either direction. No matter how technically perfect, a forecast for purposes of practical consumption is only as good as its underlying assumptions or range of assumptions. Exogeneous factors disregarded in the assumptions can upset everything.

E. *Statistical definitions and data errors*

Text discussions touched on uncertainties generated by questions of the definition of the consumer price index. It seems worthwhile here to point up briefly some of these and related matters.

The world of intelligence measurement and educational policy vis-à-vis minority groups has been beset for years by questions and controversy about traditional IQ measures, their validity, and their predictive value

for educational career planning. A number of similar doubts and controversies affect key economic measures used in predicting, evaluating, and recording the state of the economy. In brief, some of these are as follows:

1. Does the consumer price index (CPI) properly measure the actual course of inflation? Is its system of weighting fairly representative of consumer budgets? Does it overstate inflation that is due not to money-spending factors but essentially to extraneous cost factors, like OPEC oil pricing, environmental protection costs that yield an unrecorded benefit, or productivity changes due in part to demographic changes affecting the composition of the labor force?

2. What is the effective money supply? Will even newly revised M_1 and M_2 concepts tell us the approximate monetary aggregate for purposes of testing the Friedmanesque monetarist theories of inflation?

3. Do official gross national product (GNP) figures fairly represent the magnitude of the national economy? Can an apparently attenuated GNP economy be bolstered to actually healthy levels by an underestimated, underground economy that escapes detection by the tax collector and the statistics gatherer? How does the underground economy fluctuate in relationship to the official GNP? Could the difference between the reality and the official estimate mean the difference between a mild and a moderate recession?

4. Exactly who are the unemployed? How many are *de facto* unemployable? How many are actually employed? What is a realistic estimate of the underemployed?

Possible data errors are another source of uncertainty. The recent period has witnessed a gross error in monetary magnitudes, which triggered a substantial stock market decline. Appreciable revisions sometimes occur in time series data on key economic indicators. Forecasts for 1980-81 as of January or February 1980 are, therefore, subject to considerable possible error and uncertainty due to possible vagaries in recent data observations that have a direct bearing on the interpretation of current economic trends.

F. *Other levels of uncertainty*

1. *Decline of neo-Keynesianism*

Conservative economic observers note that economic policymaking and its theoretical orientation are in the throes of a major shift, caused primarily by the disturbing persistence and acceleration of inflation. Naive neo-Keynesianism has been called into question, and there is increasing departure from the former tendency to focus economic analysis almost exclusively on unemployment and governmental management of aggregate demand.[3] There is a growing emphasis on management of supply—both aggregate and sectoral. This, in turn, involves new attention to incentives to productivity, saving, innovation, and efficient marshaling of resources. Doubts about the effectiveness of aggregate demand-oriented policies may increasingly permeate forecasting and policymaking.

2. *Role of expectations*

Expectational economics is still very much in the process of development. The role of expectations in the present inflationary situation is a source of uncertainty and has an explosive potential. The fantastic rise and day-to-day gyrations in gold prices supported by both facts and expectations is a portent of what might happen if there were growing recognition of a pending collision between spending aspirations and available resources in various other areas. How soon and how far could the process push inflation beyond the now-familiar double-digit phase?

3. *Possibilities of extraordinary surprise and error*

As observed earlier, a meaningful economic forecast must embrace a range or cluster of possible assumptions and related outcomes with probability coefficients attached to each. These probability factors, which add up to 100 percent, are based upon a combination of factual information, informed judgment, and intuition. When in doubt, a forecaster might well fall back on the rule of weather prediction: the safest prediction is more of the same or its variant, a continuation along the existing path of change. A sobering qualification of the weather prediction rule is the element of surprise and unexpected disturbance that has marked social and political processes. In spite of the elaborate apparatus for foresight and early warning, major change after major change has descended upon

the post-World War II world with little or no warning or precognition. Sometimes important courses of events have reversed the overwhelming consensus of professional economists. A number of these major forecast and interpretive errors, which have had appreciable confusing effects on practical policies, may be cited:

- The almost unanimous opinion that the economy was headed for deep recession or depression, with massive unemployment in the immediate post-World War II demobilization period, 1945-46.
- Gross misreading of the effects on the role and price of gold resulting from the various steps leading to demonetization in the period 1967-71.
- Chronic underprediction of the rate of inflation through much of the 1970's, in which plain error and politicization were hard to distinguish.
- Substantial failure to grasp the serious implications and ultimate threat to the foreign exchange value of the dollar and U.S. economic strategic strength of the transition to stubborn international payments deficits in the 1960's and 1970's.
- Apparent refusal of many, if not most, economists to perceive or accept the implications for the interest rate structure, money supply, and inflation pressures in the chronic budgetary deficits, particularly throughout the late 1960's and the 1970's.
- In a somewhat different vein, the myopic attitude of most liberal economists (along with some other scientists) toward the concept of intensifying Malthusian pressures on food supply and other essential resources in the 1970's and 1980's.

The novelty and unprecedented character of the problems now affecting the very lifeline of the economy and the monetary structure present unfathomable uncertainties—both as to the turn of events and as to the response of the economy, with and without various adaptations of national policy. These things defy ordinary forecasting techniques, although the great macroeconomic models will help give better shape and quantitative contours to alternative scenarios than were possible in the past. However, experience gives little assurance (and indeed indicates the opposite) that we now know so much that major surprises or errors of interpretation can be avoided.

FOOTNOTES

[1]See Ammer, Christine, and Ammer, Dean. *Dictionary of Economics*. New York: The Free Press, Macmillan, 1977.

[2]Rowen, Hobart. "Kreps: Introspective Farewell." *Washington Post*, November 3, 1979. pp.. A1, A4.

[3]See Burns, Arthur F. "How To End Inflation." *First Monday*, October-November, 1979. pp. 4, 21.

Appendix B.

COMPARATIVE PERFORMANCE OF FIVE MAJOR MACROECONOMIC FORECASTERS IN THE 1970's

This appendix summarizes briefly an evaluation of the comparative performance of major macroeconomic forecasters in the 1970's. The analysis covers the five following major forecasters:

1. Chase Econometric Associates, Inc.
2. Data Resources, Inc. (DRI)
3. MAP-CAST group, General Electric Co.
4. Wharton Econometric Forecasting Associates, Inc.
5. Median forecast from a survey conducted by the American Statistical Association and the National Bureau of Economic Research.

Among the major findings of the evaluation:

1. Chase Econometric Associates, Inc., made the most accurate predictions of the money supply.
2. Data Resources, Inc. (DRI) produced the most accurate predictions of short-term interest rates.
3. Forecasts of real growth, inflation, and unemployment for the period from mid-1974 to mid-1975 were generally wrong.
4. Inflation forecasts for the period from mid-1975 through mid-1978 were quite accurate.
5. Forecast evaluation must be "relative" rather than "absolute" because no reasonable absolute standard exists.

6. Better forecasts could have been made by the forecasters if they had paid greater attention to the statistical properties of the economic variables to be forecast.

Source: Based on "Whose Crystal Ball Is Clearest of All?" Outlook Section. *Nation's Business*, January 1980, p. 14; this, in turn, reports findings by Stephen K. McNees, vice-president, Federal Reserve Bank of Boston, published in the *New England Economic Review*.

Appendix C.

NEGLECTED CONTINGENCIES AND POLICY OPTIONS

The consensus-type outlook for mild recession and continued inflation—but below the 13.3 percent 1979 rate—has tended to overlook or brush aside a number of major policy options that might be chosen to intervene in a way that would substantially alter the course of economic developments in 1980. Some of these are listed with brief comments below.

1. *Mandatory wage-price controls (or freeze) and/or foreign exchange control.* Mandatory price and wage control proposals recently have been supported by Barry P. Bosworth, former director, the President's Council on Wage and Price Stability, and Bruce K. MacLaury, president, The Brookings Institution. Hearings on a legislative proposal for mandatory wage-price controls have been agreed to before the Economic Stabilization Subcommittee of the House Banking Committee. Until recently, proposals of this type almost universally elicited protestations of horror. It is standard political practice to abjure them. They have costs and disadvantages and would doubtless involve some distortions, blackmarketeering, and disappearance from open store shelves of scarce commodities that are even now rationed away from those of modest means by the bidding up of their price by those with more purchasing power. Nevertheless, such a system helps brake and contain inflation, especially under conditions when ordinary fiscal and monetary programs cannot or will not be swung into action. Controls resist the momentum of disorderly change and help give the economic system a breathing spell. Foreign exchange control would serve similar purposes, including a check on oil imports. This form of intervention would lead into a new and different economic scenario, which would at least slow, if not halt, the wage-price spiral and substitute a form of repressed inflation for the present overt form. Controls were successful over a period of years in World War II and backed up the financing of the war effort.

2. *Gasoline and other energy rationing*. This type of policy direction would not only alter the way the country lived with oil shortages and price inflation but also, in conjunction with more austere import controls, slow the excess demand for oil. In some respects it would be equivalent to confronting the OPEC cartel with the equivalent of a monolithic buyer (monopsony) in the United States. This would drastically alter the price mechanism framework, generally assumed for the economic outlook in 1980-81.

3. *Severe tax on gasoline from imported oil sources*. This kind of measure, highly unpopular but plausible given greater public understanding, would serve several important related purposes: (a) curtail gasoline consumption, (b) correct the present, abject direct exposure of the American automobile driving public to OPEC oil price demands by driving a tax wedge between the buyer and seller, and (c) divert some of the excessive price that motorists are prepared to pay back into the U.S. economy for various purposes, including "synfuel" programs or tax relief in other areas. This approach could alter the typical 1980-81 economic scenario in which price adjustments are left to the marketplace with no tax incentive modification.

4. *Tax increase program*. The federal budget for fiscal year 1981—with its anticipated $616 billion outlays, $600 billion receipts, and $16 billion deficit—may undergo alteration in either a more stimulative or a more restrictive direction. Critics view it, like most budgets, as a political document but more than usually productive of uncertainty for the economic outlook. Some regard it as too restrictive and likely to produce a deeper slump than the under-1-percent GNP drop, the 7.5-percent unemployment rate, and the 9-percent GNP deflator rate of inflation officially projected. They point to the "high employment surplus" of $57 billion the present 1981 budget would produce as a severely deflationary "wrench."[1] Such critics look to possible tax reductions or job creation programs to relax the budgetary restraint. But other critics, who also view the budget as an essentially political document, believe the $16 billion estimated deficit for fiscal year 1981 is "the greatest underestimate since Pearl Harbor." Defense spending and other spending pressures not accounted for in the budget are the responsible factors. Of the latter group of critics, some would favor a general tax increase, at least as soon as politically realistic in an election year.

The tax increase receives greater support by those who reason that defense activity that generates employment and diffuses new demand for consumer goods and services does not produce consumer items to absorb the demand it generates. Using the guns-and-butter analogy, guns (which generate, but do not automatically absorb, consumer purchasing power) are a more inflationary increment to the economy than the butter category.[2]

5. *Accelerated synthetic fuel program, including oil shale and sands.* Synthetic fuel and oil-shale-type fuel, as well as biofuel efforts, are part of the present economic horizon. But various forms of acceleration as civilian and military needs may dictate should not be dismissed. These would, like military spending, counteract or shorten a predicted recession. Some kind of "technology fix" of the breakthrough type, either on the supply side or on the conservation side, could emerge that would alter the economic horizon even for the early 1980's.

6. *Credit controls.* A carefully designed set of selective credit controls could be instituted, based on the idea of restraining inflationary demand in most sectors subject to buying pressure but relieving certain strategic areas, like new housing, where resources are available and basic needs exist. This approach, controversial and subject to considerable opposition, would serve to limit spending on most items to funds available from current income and curb consumer buying binges financed with credit.

FOOTNOTES

[1]High employment surplus (or deficit) is the budgetary position produced at about a 5.1-percent unemployment rate. The high employment budget position is estimated at a deficit of $12 billion in fiscal 1979 and a surplus of $4 billion in fiscal 1980. Deficits are expansive; surpluses, deflationary in the Keynesian lexicon. Thus, a switch to a $57-billion surplus would be considered quite "repressive" in 1981.

[2]Cf. Business Outlook. *Business Week*, February 11, 1980. pp. 27-28; Rowen, Hobart. "The Cost of Guns and Butter." Economic Impact. *Washington Post*, February 3, 1980. pp. F1, F14; and "The Carter Budget." Editorial. *Washington Post*, January 24, 1980.

Appendix D.

GOVERNMENTAL FORECASTS JANUARY 1980

Two major government forecasts of late January 1980 both reflect the then prevailing economic outlook: Mild recession in 1980, subject to uncertainties and qualifications. One is the prediction of the Congressional Budget Office (Alice B. Rivlin, director). The other is embodied in the President's Economic Report and the accompanying Annual Report of the President's Council of Economic Advisers (CEA).

The CBO predicted a mild 1980 recession with a sluggish upturn by the end of the year. Inflation was expected to moderate only slightly; unemployment was forecast at between 7.2 percent and 8.2 percent by the end of 1980. For 1981 the CBO forecast contemplated steady inflation but worse joblessness, hitting the 7.5 to 8.5 range by the end of 1981.

The 1980 portion of the CBO forecast is consistent with the Administration's budget assumptions and the views of other major private forecasters.

The CBO forecast for a mild recession was based, according to Director Rivlin, on the belief that U.S. exports will increase while imports will decline. Also business spending was expected to turn up sooner than in past recessions.

The sluggish recovery was attributed to persisting inflation (presumably cutting down on real purchasing power), continued high short-term interest rates, and the scheduled 1981 Social Security tax increases, which will reduce consumer buying capacity.

CBO Director Rivlin outlined qualifications and uncertainties. These include the possibility of a repetition of the 1979 experience—the recession that did not occur—with employment staying surprisingly low and unexpectedly strong consumer spending. She recognized the

declining productivity phenomenon as something "economists don't fully understand," something requiring further study.

Major risks cited are as follows:

- Major interruptions of the oil supply line, which would produce worse shock inflation and aggravate the recession
- Substantial increase in defense spending, which would delay or prevent recession but also spur inflation.

The President's (and the CEA's) Report forecast also anticipates a mild recession and continuing near double-digit inflation—but lower than in 1979. The expected reductions in real GNP and consumer purchases are small—in the 1-percent area, representing almost a sluggish sideways movement of the economy. Moderate downturns in business capital expenditures and housing starts are factors. It counts on continuing helpful contributions from the Federal Reserve: monetary restraint, which it feels will be "consistent with lower interest rates" when the slowing of economic activity and inflation materializes in 1980.

The CEA also warns of uncertainties:

- Future price and production decisions of OPEC (oil price rises greater than the general inflation rate would spill over into greater energy costs, wages, and industrial goods prices)
- The direction of interest rates

- The behavior of the personal savings rate (the abnormally low level of which in late 1979 supported strong consumer buying).

A brief tabular comparison of major elements in the CBO and the Administration's economic report forecasts is presented below.

		CBO	ER-CEA
Real GNP, percentage change	1980	-2.3 to -0.3%	-0.75 to -1.25%
	1981	2 to 4	2.8
Unemployment rate	1980:IV	7.2 to 8.2	7.25 to 7.75
	1981:IV	7.5 to 8.5	7.25
Inflation rate			
GNP deflator	1980:IV	8.2 to 10.2	9
	1981:IV	8.1 to 10.1	8.6
CPI	1980:IV	8.6 to 10.6	10.4
	1981:IV	8.3 to 10.3	8.6

Source: Compiled from data appearing in a news article by Jonathan Fuerbringer, *Washington Star*, January 20, 1980, and *The Economic Report of the President*, transmitted to the Congress in January 1980, "The Economic Forecast," pp. 69ff.

Appendix E.

THE DISSENTING VOICE OF ARIMA

Amidst the chorus of macroeconometric voices predicting recession, one technique—discounted because of internal inconsistencies and other semi-technical deficiencies by orthodox macroeconometric model standards—suggests that recession is not here and is not imminent. That technique of economic forecasting is known as ARIMA: Auto Regressive Integrated Moving Average Analysis. It is presented by DRI, in contrast with the DRI macromodel of the U.S. economy, with the statement that "the ARIMA forecasts continue to turn up little evidence suggesting a recession over the next four quarters."[1]

The ARIMA forecasts of January 1980 indicate a 2.2-percent real growth rate for constant dollar GNP in the fourth quarter of 1979 versus -0.6 percent in the DRI control forecast and a constant dollar GNP level nearly 4.5 percent higher than the DRI structural model for 1980:III.

The DRI comparison of its ARIMA and structural model forecasts shows that ARIMA predicts stronger real demands and higher short-term interest rates than the control results with the structural model. With respect to inflation, however, ARIMA produces results that the DRI analyst considers mixed and apparently inconsistent: its all-urban CPI is higher, but the implicit GNP deflator is lower than predicted by the structural model.[2]

FOOTNOTES

[1]Cooper, Frank. "ARIMA." *The Data Resources Review of the U.S. Economy* (Lexington, Mass.), January 1980. p. 1.162.

[2]For the reader who may wish further background before delving into auto-regressive, integrated, moving-average analysis, it is a univariate methodology and is not a correlative method. It represents a generalization of a method outlined in the Box-Jenkins *Time Series Analysis* of 1976. It does not reflect the interplay and interactive results of the simultaneous equations model, but it tends to avoid some of the possible errors of the past relationships employed as the basis of the structural-type model.